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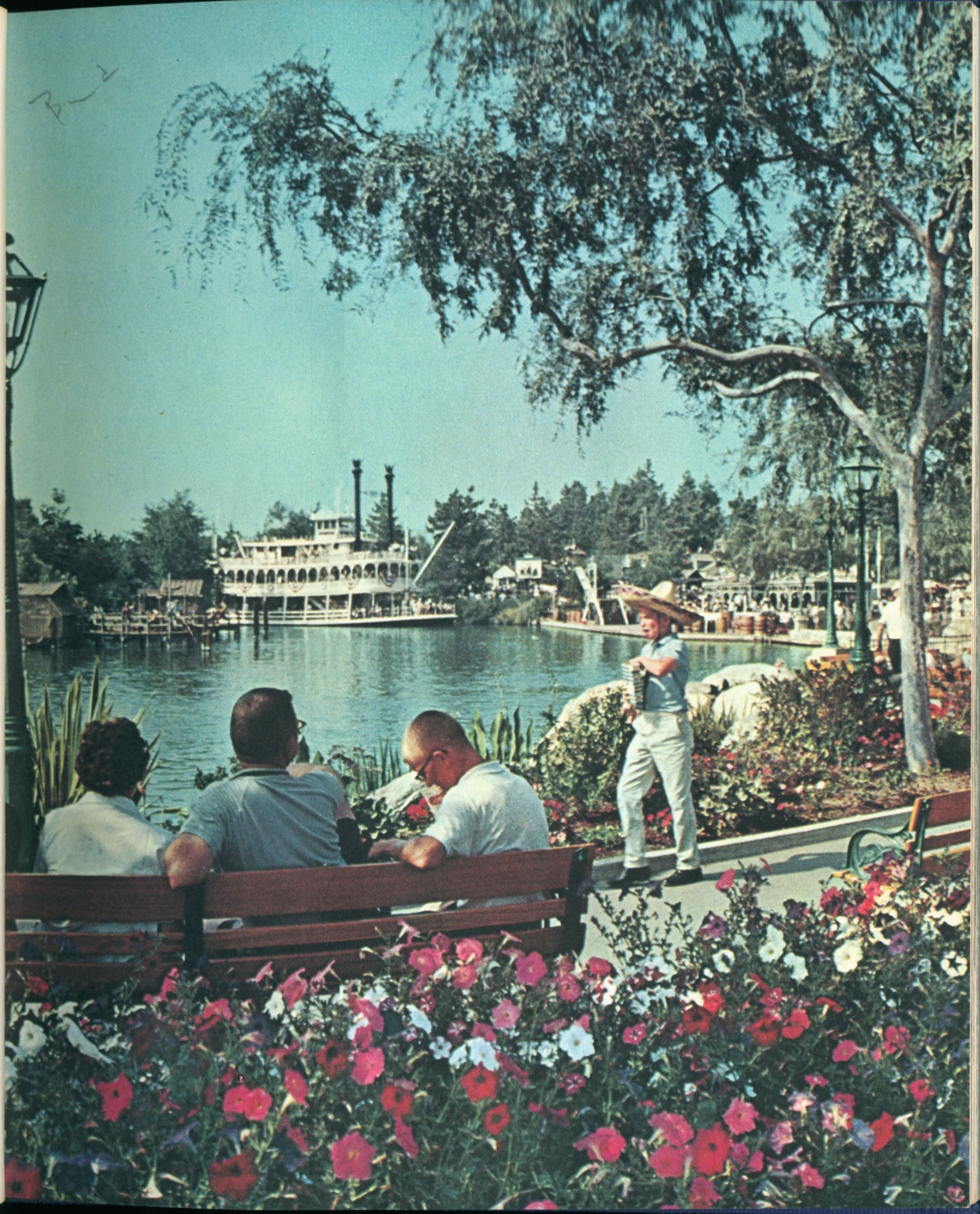

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Walt Disney DISNEYLAND WORLD of FLOWERS

by Morgan Evans

Dedicated to the memory of Jack Evans

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FEB 10 1967

This is the story of the landscape at Disneyland.

In a sense, Disneyland is a stage—a most unusual stage. Members of the Disneyland audience, unlike the audience at a motion picture or a Broadway show, do not simply look on. They participate in the drama, the adventure or comedy. They walk onto the stage. They move through the sets. They touch the props. They examine the set dressings. And so sets, props and dressings must be authentic.

At Disneyland, a jungle must have a jungle landscape. The Rivers of America must be banked by trees which are indigenous to American rivers. And a Living Desert must, in truth, appear as a living desert.

To achieve the right effect, our Disneyland landscape architects combined their talents with those of builders and maintenance personnel and created a believable and authentic scene of nature's own design.

In giving credit for the landscaping at the Park, it is impossible to mention all who have contributed. Special plaudits are due to Ruth Patricia Shellhorn for her design of the formal Victorian plan for Main Street, the Town Square and the Plaza. The trees and shrubs she selected in the spring of 1955 are still used. The late Jack Evans, to whom this book is dedicated, worked mightily to create authentic and delightful landscapes throughout the Park. Morgan Evans, a third generation horticulturist and brother of Jack Evans, has been supervising landscape architect at Disneyland since 1956.

This book by Morgan Evans is the story of the living scenery at Disneyland. It is also a guide for those who wish to take a landscape tour of the Park's unique international botanical collection.

Walt Disney

Introduction

It took magic of a sort to transform 165 acres of flat, windswept land in Anaheim, California, into Disneyland, a Magic Kingdom of mountains, lakes, forests, lawns and gardens known the world over.

Even when Disneyland was still just a series of sketches and plans, Walt Disney was keenly aware of the importance of imaginative landscaping in the Park. Today, Disneyland's horticultural display charms visitors with its unusual plants from around the world.

During the hectic months in 1955 when Disneyland was being completed, and in the years following, plants from many lands were collected and moved into the Park. With few exceptions, they have survived the transplanting and have thrived in their new home. Some trees have put on so much growth, in fact, that it would be impossible to move them again. Guests strolling through the Park today may find it hard to believe that only a few years ago there was nothing to see there but row upon row of orange trees.

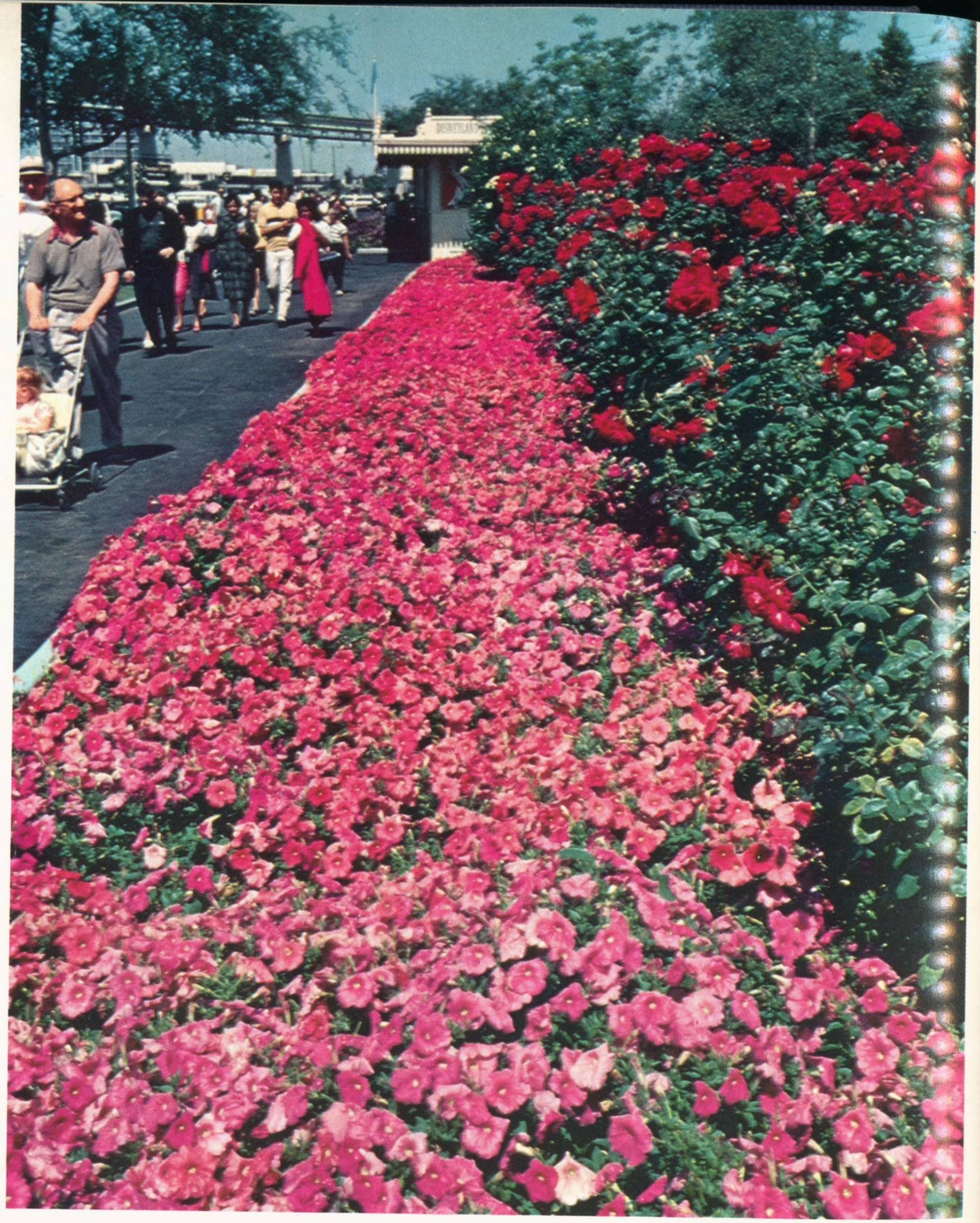
After the decision was made to purchase the land in Anaheim for the Park, our first chore was to remove the citrus trees and clear the stage for huge earth-moving equipment that would reshape the resulting wasteland.

Walt Disney's Magic Kingdom was conceived to provide an escape from the cares of today into the nostalgia of the past, the excitement of the future and the wonderful realm of fantasy. An important step toward this objective was the visual exclusion of the twentieth century by the construction of a 20 foot "berm," a mound of earth completely surrounding the Park. The separation was further effected by dense plantings of trees and shrubs atop the berm, which today form the horizon in many vistas from inside Disneyland.

Bulldozers, turnapulls and other giant equipment excavated and hauled approximately one million tons of earth to build the berm and sculpture the mountains, valleys, rivers, streams and waterfalls envisaged by Walt Disney.

The landscape department followed in the wake of the bulldozers, transforming the arid scene into assorted jungles, forests, gardens and lawns. First came the big trees, their roots packaged in heavy boxes. Some weighed as much as 22 tons. Then came the smaller trees, shrubs, vines, and the irrigation systems to supply the rainfall for these plants from faraway lands. At the last minute came the flowers (already in full bloom from the greenhouses) and the grass, which was unrolled carpetlike as fully established lawns.

Anaheim enjoys a congenial climate, but the summers are warm enough to make some shade very welcome. Shade trees of appropriate size and variety are not in ample supply



Throughout the spring and summer, petunias and roses brighten the entrance to Disneyland. This petunia is a hybrid called "satin." It is shown in detail on the opposite page. To the right is the Carousel rose, an appropriate choice for Disneyland. Its velvety red flowers are on display eight months out of the year.

in southern California; Disneyland's needs soon exhausted the available stock from commercial nurseries. It was necessary to turn to old gardens and estates, sometimes hundreds of miles distant, for additional specimens.

California's projected freeways, routed unavoidably through residential districts, afforded an unusual opportunity to salvage full-grown trees. Former owners can take some comfort from the knowledge that many fine specimens were literally snatched from the jaws of the bulldozers, then packaged and transported to Disneyland for a new lease on life. Here, spreading their branches against the sky, they lend shelter to bird and man, and contribute graceful beauty for millions to enjoy.

From the very beginning Walt Disney insisted upon plenty of trees to provide shade for the Park's guests, and we miss no opportunity to augment the number. The objective is not without problems, however: where to put the additional trees? Shade is a must, but we also need sunshine for lawns and flower beds. Furthermore, we cannot afford to obstruct the pathways or the view of the authentic detailing on buildings which contributes so much interest and charm to Disneyland. For these reasons we are approaching a saturation point with large trees in most of the public areas.

Disneyland's landscaping covers a broad spectrum, from a simulated Congo rain forest in Adventureland to the contemporary display gardens surrounding Monsanto's House of Tomorrow. Walt Disney requested year-round color, and the landscape department has managed to spread before our guests a perennial welcome mat of flowers. Whether the season be spring, summer, autumn or winter, one may visit Disneyland at three-month intervals and find the same flower beds in bloom but displaying different varieties each time. From the time the visitor enters the main

Juniper and xylosma provide a green backdrop for the welcome mat of portulaca, candytuft and petunias at the entrance to Disneyland.

parking area, which is banked with colorful oleanders, until his departure from the Magic Kingdom, he will seldom be out of camera range of flowers.

Over half a million annuals are set out each year, carefully scheduled and grown to order by local nurserymen. Over 750 different species and varieties of plants are permanent residents of the Park. Most are of interest to the home gardener; some only to the horticulturist or student of botany. A few are unique, perhaps not in cultivation elsewhere in this country.

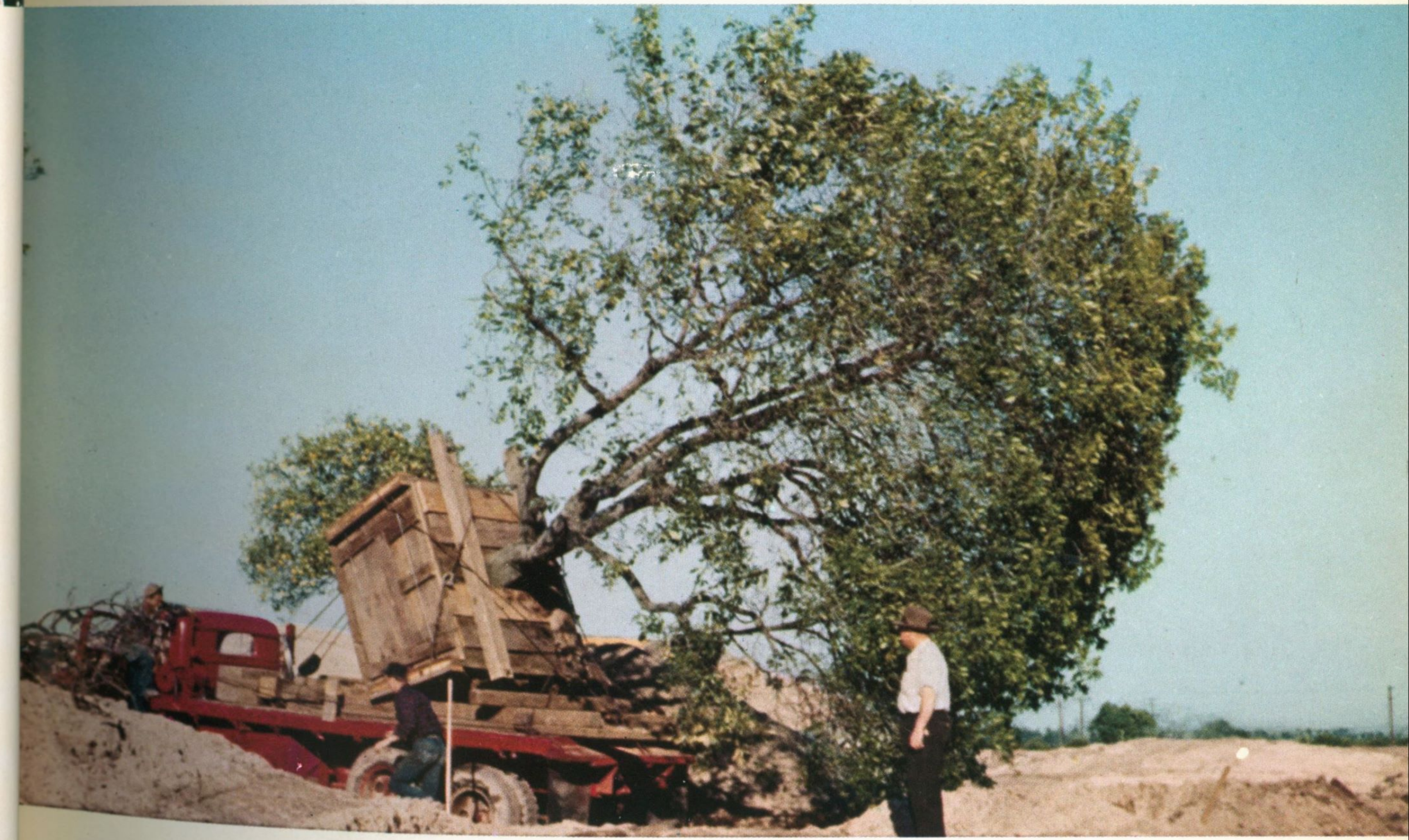
Pleasant weather is the general rule in Disneyland, and though rain is infrequent we do have some hot days and a few cold nights. Fortunately, people have devised effective means of adapting themselves to seasonal climatic changes. Our plant charges, on the other hand, are like children who cannot fend for themselves and must be protected from getting wet, cold, and even dry, feet. They require shelter from sun and windburn as well as frostbite. So in addition to irrigation systems, the landscape department has provided hot wind machines to churn the chilling air of winter nights, modifying the discouraging effects of cold temperatures on tender specimens. It has also established spreading trees to shade delicate small plants from the sun's rays, and windbreaks to buffer periodic "santana" winds from the desert—anathema to all plants great and small.

No commentary on Disneyland landscaping would be complete without reference to maintenance and cultural practices. One phase of this very large operation is pruning. A great deal of trimming is required with shrubs as well as trees, particularly where the plantings dress a scaled-down set. But pruning is only part of the job. Grassy areas of the Park are cut weekly, and lawns must be completely renewed at least once a year.

Like every home gardener, but on a much larger scale, we keep up an unending battle against the vagaries of weather, a host of insect pests, and an assortment of fungus diseases. And don't forget the ever-present weed problem, which in the case of Disneyland is monumental! The welfare of our plants in the Park demands constant vigilance on the part of competent gardeners who, if not seen, are nonetheless ever-present.

We hope that on your visits to Walt Disney's Magic Kingdom this book will help you to survey the varied landscape with greater interest and enjoyment. It has been our endeavor to contribute some information about the various plants you will see; their application in the Park; their diverse origins and history and their individual requirements.

Many of Disneyland's specimen trees arrived at the Park in the same manner as this Pittosporum undulatum. Formerly a senior citizen at a local private estate, this tree found a home in Adventureland's jungle.



Main Street

Every American small town at the turn of the century had a town square or park, an oasis of calm amid what was then considered the bustle of everyday life. Disneyland reflects this pattern. Our Town Square has a flag pole, sidewalks, and enough space for band concerts. It also has shade trees, lawns, and formal beds displaying the flower of the season.

During the summer, about a quarter of a million people pass through Disneyland's Town Square each week. The band gives concerts here every afternoon. There are no "Keep Off the Grass" signs, and a good many of our guests walk, stand or lie on the lawns. This provides an interesting test in the traffic capacity of turf grasses. At least ten different combinations have been tried. Bermuda and St. Augustine grass from the West Indies are much tougher than conventional Kentucky bluegrass, yet none will survive beyond five or six weeks. It is necessary to replace the lawns periodically, not from seed, but with established sod brought from the sod farm and unrolled into place in Disneyland.

Much of the shade in the Town Square and the Plaza is provided by Brazilian pepper trees, naturalized citizens of southern California. Introduced from South America, these evergreen trees lend themselves to a semiformal motif or to a rugged natural setting, depending upon how they are pruned. A good example of informal pruning may be seen in front of Adventureland's shooting gallery; it is a marked contrast to the neat, trim look of the Town Square trees. These peppers are fast-growing and tough; of easy culture, they offer ample shade and are relatively pest free.

The Siberian elm is widely used across the United States because it is also strong and fast-growing. Along Main Street you will see a small, graceful, and nearly evergreen form of this elm. These have been carefully pruned to their present shape to avoid interference with the double-decker sightseeing busses which pass close to the curb. A pair of these same elms framing the entrance to Fantasyland are permitted a more natural character.

Disneyland's Plaza at the end of Main Street is a formal little park from which radiate the paths to Tomorrowland, Fantasyland, Frontierland and Adventureland. The principal trees here are gnarled olives, about 75 years old, and representative of a vanishing California industry. Olives were among the first trees in cultivation, dating back to early Mesopotamia. They came to California via

This Brazilian pepper tree, pruned back to reveal its interesting branch structure, will quickly leaf out to provide welcome shade from the summer sun.

South America and Mexico. The Franciscan monks brought seed and planted groves around the missions; later commercial orchards covered between thirty and forty thousand acres in California. The olive industry began to decline many years ago, however, and the huge groves have fallen before residential land developers.

Unlike many other California crop trees, the olive can be easily transplanted at any age; one group of trees has been moved in Disneyland no less than six times. We pick them up with a skip-loader, hose off the roots to remove excess soil, and relocate them in a different area—it's that simple.

Thousands upon thousands of old olives are now cast in the role of ornamental shade trees, and Disneyland has some particularly fine examples. The purpose of commercial growers, when the industry was thriving, was obviously to produce a large crop of olives—the bigger the better. In landscape use, productivity has become a liability, particularly if the trees shade a patio or path; the ripe black fruit is slippery under foot and leaves an unsightly stain on the pavement. The raw material for several tons of pickled olives could become a real problem at Disneyland. We use a special spray on the olive flowers to prevent production of fruit. As a result, though we have many large trees in the Park, it would be hard to find an olive on the ground in harvest season. Olive trees are evergreen, affording year-round shade, and enjoy normal garden culture. Their graceful over-all contour and pleasing open structure is maintained by yearly pruning.

In the Plaza you will see some of our finest olives interspersed with fern pines, India laurels and evergreen pears from China. The Plaza also delights our guests with showy flower beds of seasonal color. Here we endeavor to maintain a continuous floral display, and depending upon the season, you may find Iceland poppies, begonias, zinnias, pansies, petunias, or poinsettias in bloom.

A word about the poinsettia. Best known as an indoor Christmas plant, it provides a fine splash of color for a limited time, and once the flower is spent, it goes the way of all seasonal house plants—out!

However, in tropical and sub-tropical climates it assumes an entirely different role. The poinsettia, native to Central America and Mexico, grows into a small tree in its homeland and carries flower for six or seven months of the year. Here in southern California, in some of the old residential gardens, one can find specimens ten feet high and 15 feet across.

But in Disneyland the poinsettia has a new look. Our landscape department has pressed it into use as a bedding plant. The need was for a low-growing type—in essence, all flower and no stem. The chemist came to our rescue again with a new formula that stunts the ver-

Shasta daisies and companion perennials crowd the bank of a stream. In the background, left, is an evergreen elm; to the right, a Brazilian pepper.

Disneyland's Christmas tree, a 50-foot white fir from northern California, forms a backdrop for a band concert. The fir is flanked by two Brazilian pepper trees and in the foreground is a display of poinsettias.

tical growth of the plant without affecting it in any other way; the reward, a full-size flower on a half-size plant.

As a result, Disneyland in December and January does indeed roll out the red carpet. There are dazzling beds of poinsettias, petal to petal, upon which the eye or camera lens may feast.

From the Plaza the visitor may go into any of the four magic lands through garden entrances, each reflecting the character and mood of the lands they border.

The entrance courtyard of Tomorrowland has a background setting of stately Italian cypress trees supplemented by groupings of cocculus, viburnum, and Pittosporum tobira.

Lining the fountains on either side are the interesting "corkscrew" willows related to the Chinese weeping type. Encircling the Clock of the World is a rich flower bed containing colorful annuals.

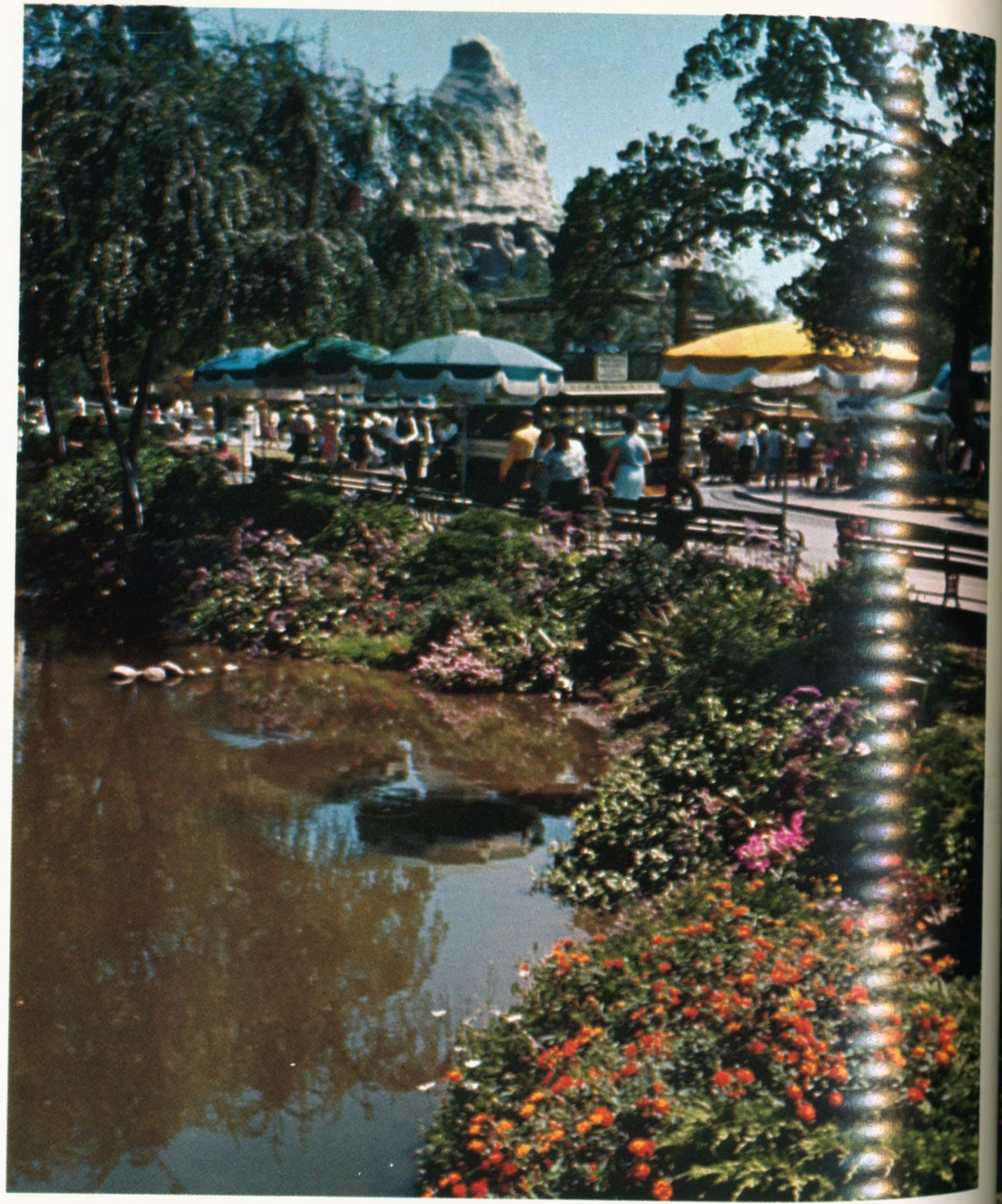
Nearby is the Monsanto House of Tomorrow in a setting which blends the disciplined form of the structure with a natural environment. In the "sunken" garden, on the slopes and edging the water are several varieties of juniper (including a specimen plant of Juniper Pfitzeriana 18 feet across), striped pygmy bamboo, Oregon grape, azaleas and stylized guava trees. Meandering pools and lichen-covered boulders complete the composition of a distinctive contemporary garden with oriental overtones.

North of the Monsanto House, across the path which leads to the Matterhorn, is Snow White's Wishing Well and waterfall grotto, surrounded by whispering pines. Filling out the landscape scene are white birch trees, Indian hawthorne and honeysuckle.

The drawbridge leading to Fantasyland crosses a moat edged with "swan-proof" juniper. We call it swan-proof because those graceful white birds will eat almost anything —except juniper. Thus we are able to keep green foliage along the water's edge.

To the right of the drawbridge, two unusual trees are reflected in the waters of the moat. The taller looks like a stylized weeping willow. It is equally graceful, green all year, and produces quantities of tiny yellow flowers in

From left to right: fern pine (podocarpus), Chinese evergreen elm and melaleuca frame an old-fashioned flower border at Plaza Gardens.



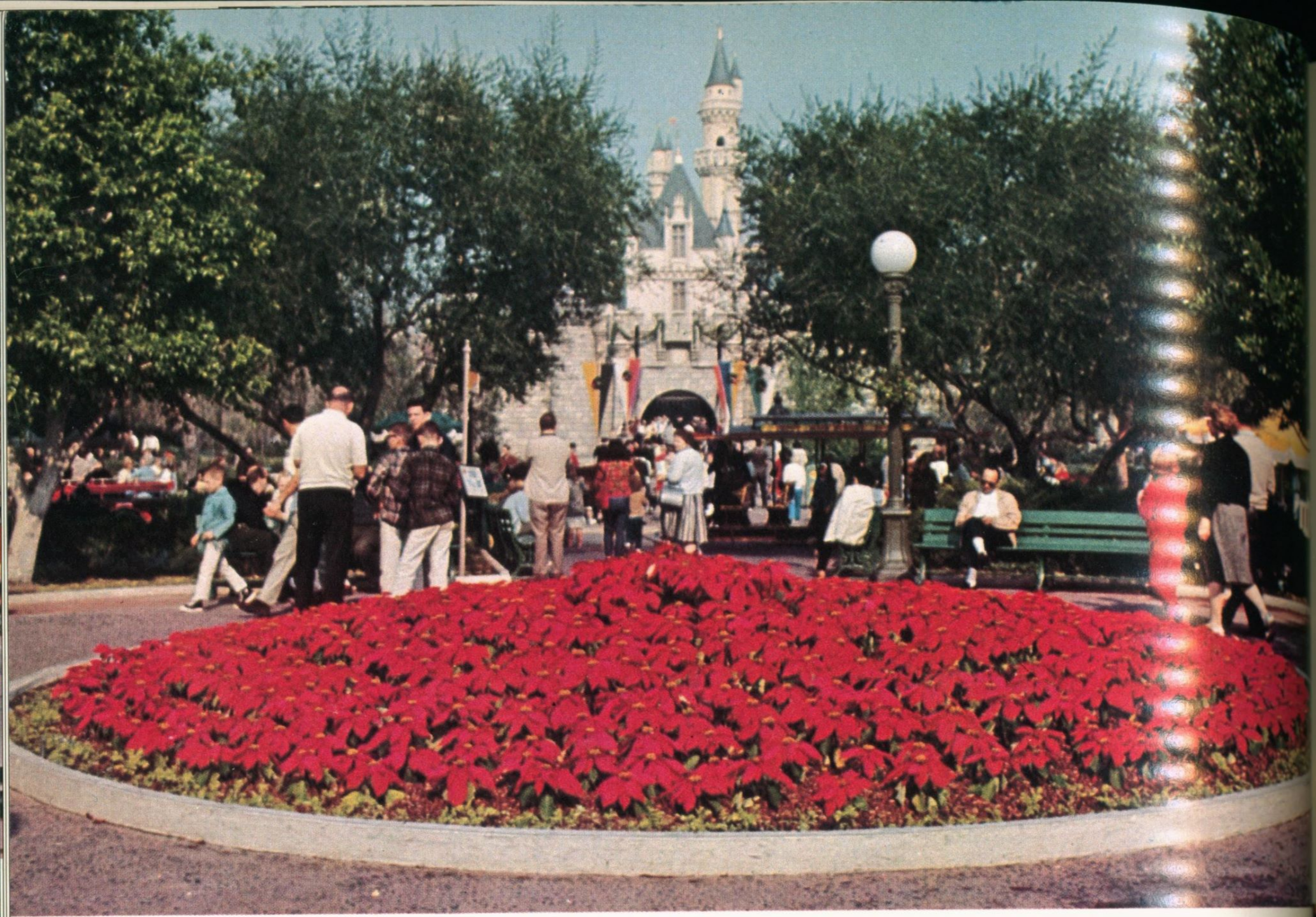
Junipers share space with annual and perennial flowers along the stream bank near Frontierland. Weeping evergreen elm stands in the background; in the foreground, right, a strawberry tree and coral lantana.

the spring. An aristocrat of the garden, this fine tree bears the awesome Latin name of Pittosporum phillyraeoides, or willow leaf pittosporum. Its companion is Melaleuca nesophila, which arches out over the water. The melaleuca is also evergreen, displays dainty lavender flowers for many weeks in early summer, and is fast-growing. This specimen is a good example of how to bring out the best in a plant by pruning. Both trees, incidentally, are native to Australia.

The Frontierland mood is set by pines, oaks and prairie grasses. Two curious trees flank the rustic entrance bridge. They are Arbutus unedo, commonly called "strawberry tree." The fruit, which ripens from green to yellow to red, closely resembles a strawberry. It is in fact edible, but not particularly palatable. Only the birds seem to find the tree-strawberries tasty. The arbutus is a slow-growing evergreen belonging to the heather family, which also includes California manzanita and madrone. The tree is found wild in the Mediterranean region and in Ireland. Nobody knows how it got from the Mediterranean to Ireland—it was probably transplanted by migratory birds uncounted centuries ago.

Just before crossing the bridge into Adventureland we pass the Enchanted Tiki Room where the birds talk, the flowers sing and dance, and the fabulous carved Tikis chant in

In the summer, the Plaza displays a bed of begonias ringed by sweet alyssum and golden feather. Framing the scene are India laurels with olive trees in the background.



During the Christmas season, the Plaza glows with especially grown, short-stemmed poinsettias. The backdrop trees are as green in midwinter as in midsummer.

unison. Peeking through the gate into the courtyard entrance we catch a glimpse of lush tropical planting—philodendrons in variety, tree ferns, miniature bamboo and bananas, clivia, drifts of assorted bedding ferns. Beyond the Adventureland bridge we are lured by tall waving bamboo, the lovely blue-flowering jacaranda, bright bougainvillea and hibiscus, a giant red-flowering coral tree.

The landscape scene at Disneyland, as well as the gardens and parks in the area, may give the impression that southern California is a floral paradise. Actually, the southern part of the state was virtually a desert at one time. The beauty and productivity are tributes to man's imagination, initiative and industry. The introduction of adequate water and necessary soil nutrients have enabled us to grow not only commercial food crops, but ornamental plants from around the world.

Flowers, trees and shrubs you see in Disneyland, for example, didn't just grow "like Topsy." Our landscaping consists of approximately 95 percent imports from far lands, as compared to five percent native plants. It takes planning to accommodate not only California sycamores, Catalina cherries, fremontias, poppies and other natives which can survive on only ten or twelve inches of rainfall a year, but also the more exotic plants which may require the equivalent of 50 inches of rainfall each year.

At Disneyland, there are more than 750 varieties of non-native plants on view. In the Plaza alone, visitors will find junipers, willows, evergreen pear trees from China; pepper and kapok trees from South America; black pine and a dozen different evergreen shrubs from Japan; African fern pines; rubber and orchid trees native to India; Hawaiian tree ferns; the flame bush from the West Indies; cabbage trees and ornamental flax from Australia. The roll call could be extended to many times this number throughout the Park.

Plants which provide cut flowers, the mainstay of the florist business and the home gardener as well, also come from around the world. Professional and amateur gardeners have improved most of them to the extent that the packaged seeds we buy today should be credited jointly to Mother Nature and the geneticists. Hybridists are ever at work to produce finer strains with shorter stems or longer stems, brighter or softer colors, larger and sometimes smaller blossoms—and always a plant with greater resistance to disease and longer staying power as a cut flower. New varieties compete for national and international awards, ad infinitum, and at Disneyland we are privileged to display some of these new introductions a year or two before they become available on the market.

In order to do justice to these bedding plants, we manufacture our own soil. It is

The beautiful open branch structure of this 75-year-old olive tree is maintained by semi-annual pruning. Complementing the Plaza Garden scene are juniper and white petunia, with Hahn's dwarf ivy as ground cover.

made up of approximately equal parts of fresh redwood sawdust and clean granular sand, plus the essential chemical nutrients. Eight to ten inches of this soil mix is placed in the flower beds where, with systematic supplemental feeding, it will sustain four or five crops a year. After two years the mix is replaced with a fresh batch, not because the soil is worn out, but because we are thus able to dispose of any pests and soil diseases that may have moved in in the interim. This practice which has been so successful in Disneyland might prove of value to home gardeners.

Following the planting of seasonal flowers, we cover the beds with fir bark. This dresses the scene nicely and keeps the soil damp and loose so that no cultivation is required. Cultivating tools often damage surface roots, and the process itself is time-consuming.

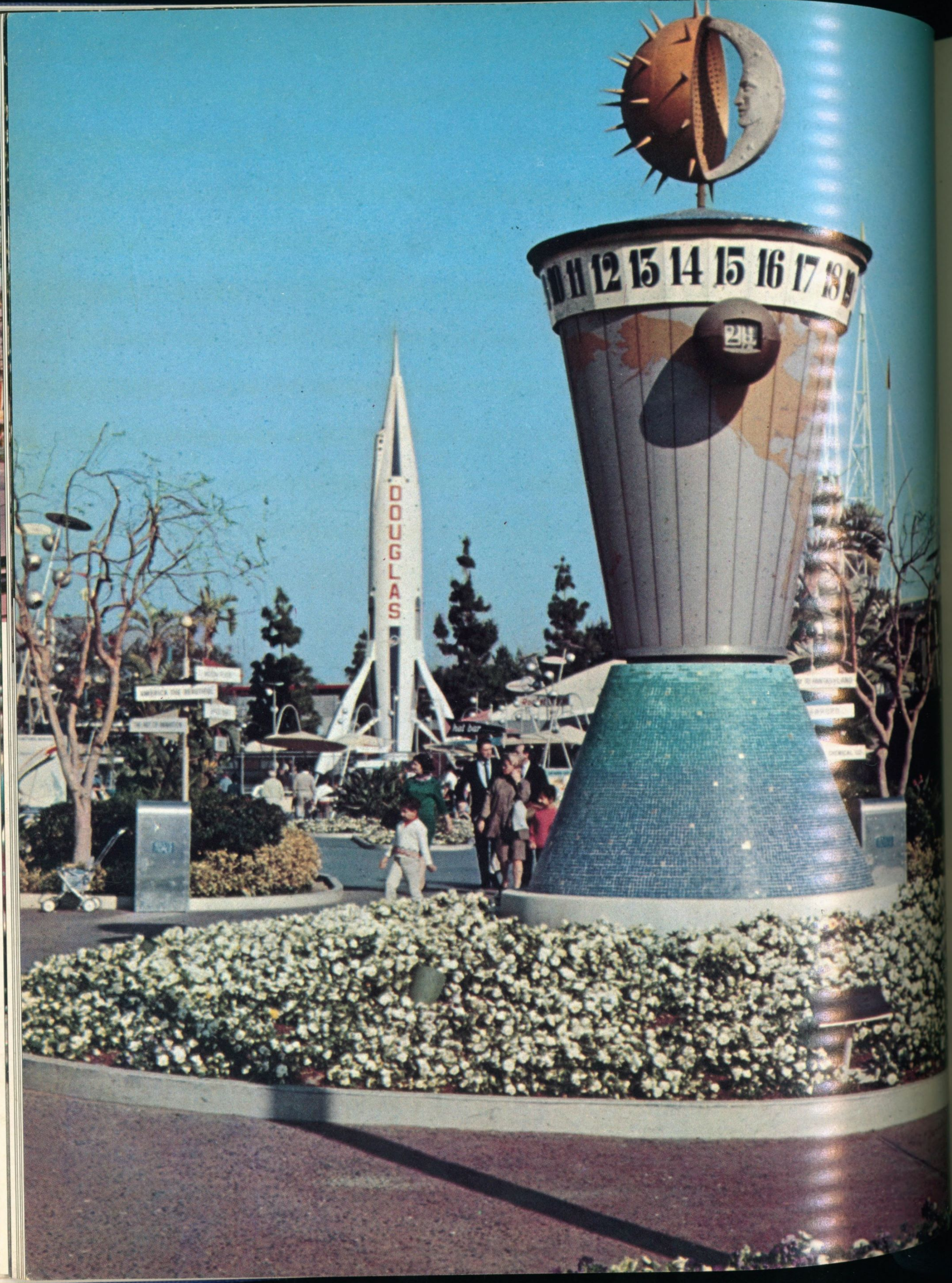
In Main Street's Plaza, perhaps overlooked before, one is charmed by the gay floral baskets hanging from the lamp posts. These baskets are packed with fir bark and soil mix in which grows a mixed bouquet of flowering plants. Generally speaking, annuals are easier to maintain as basket plants, and will create a more colorfully diversified effect than perennials such as begonias and fuchsias.

In the Plaza and throughout Disneyland, a subtle change in mood takes place after sundown. As darkness settles over the Park, we gradually become aware of the soft illumination of streets, buildings and landscapes. Thousands of tiny twinkle lights flicker in the treetops, and trunk and branch structure is emphasized by indirect lighting.

Blooming plants of all kinds glow under skillful artificial illumination. Disneyland's flowering plants were specifically selected for colors that would reflect, rather than absorb, night lighting; the pinks, yellows and whites take precedence over the darker reds, blues and purples.

Seen after dark, the paths, parkways, jungles and forests suggest a fanciful world of light and shadow that no visitor should miss.

Spring sunshine lights up a flowering bed of mixed African daisies, dominated by a variety called "Glistening White". In the foreground are yellow violas.



Tomorrowland

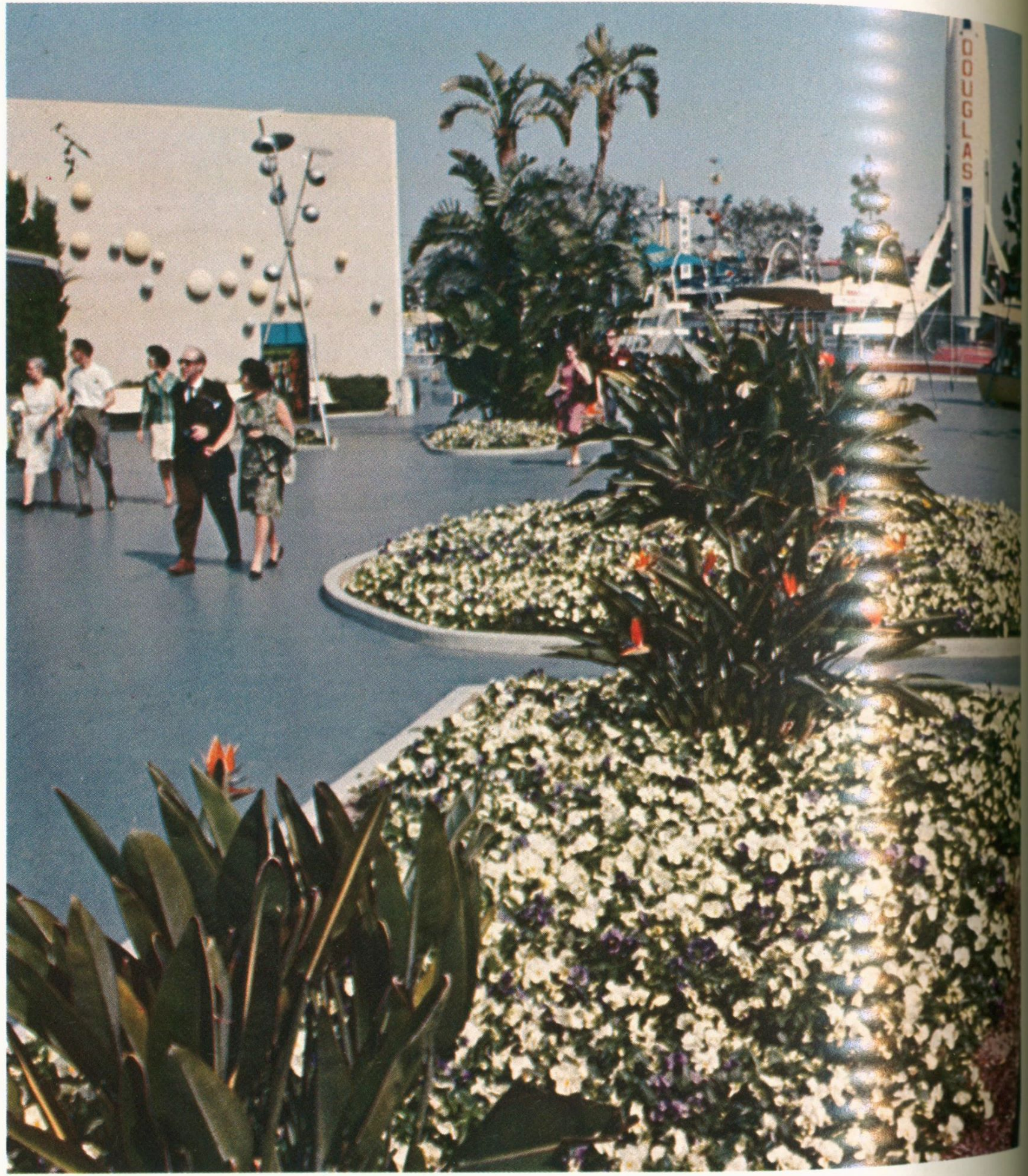
Tomorrowland links the past with the present and leads to the future. Approaching Tomorrowland, the visitor passes down the Avenue of Flags until he reaches the Clock of the World. The clock is perpetually encircled by flowers. In spring it is dressed with French dwarf marigolds, in summer, petunias, giving way in the fall to lavender vinca and, in the winter-time, violas.

Guiding the way from the clock to the heart of Tomorrowland are flower beds in geometric patterns containing graceful corkscrew willows from China (so named because all the structure of the tree, from the trunk to the tiniest twig and occasionally including the leaf, is characterized by a spiral form). In the central promenade is another twisted form, a type of juniper known as corkscrew, and also two kinds of bird of paradise plant (strelitzia)—the conventional orange flowering form and the giant species which resembles a cross between a banana and a palm and bears large blue and white blossoms.

The decision on what plants to install in Tomorrowland was probably the most difficult facing Disneyland's landscape designers. When Walt Disney asked us to plant a backdrop for a tropical jungle or an arid desert, our direction was fairly clear. But what about plants connoting the future? For the most part we worked with familiar material applicable in contemporary landscape design, such as juniper, willow, pine and bird of paradise. In conjunction with the Space Bar, however, our selection of plants includes examples of structurally exotic plant forms such as cycad (Dion edule), spear lily (Doryanthes Palmeri), and flannel leaf (Kalanchoe beharensis).

In defense of those long scientific names, let it be said that there is no conspiracy on the part of botanists and horticulturists to confound the uninitiated. On the contrary, the Latin terminology not only identifies the plant, but also describes each individual in minute detail. It is an essential means of communication throughout the world—a sort of Esperanto understood wherever plants are professionally cultivated, be it China, Egypt, Germany, England or Disneyland.

A good many plants acquire common or vernacular names in their native land, and these names frequently accompany the plant or seed to its new home, as in the case of the aforementioned Australian spear lily. However, there have been a surprising number of plants collected from around the world that

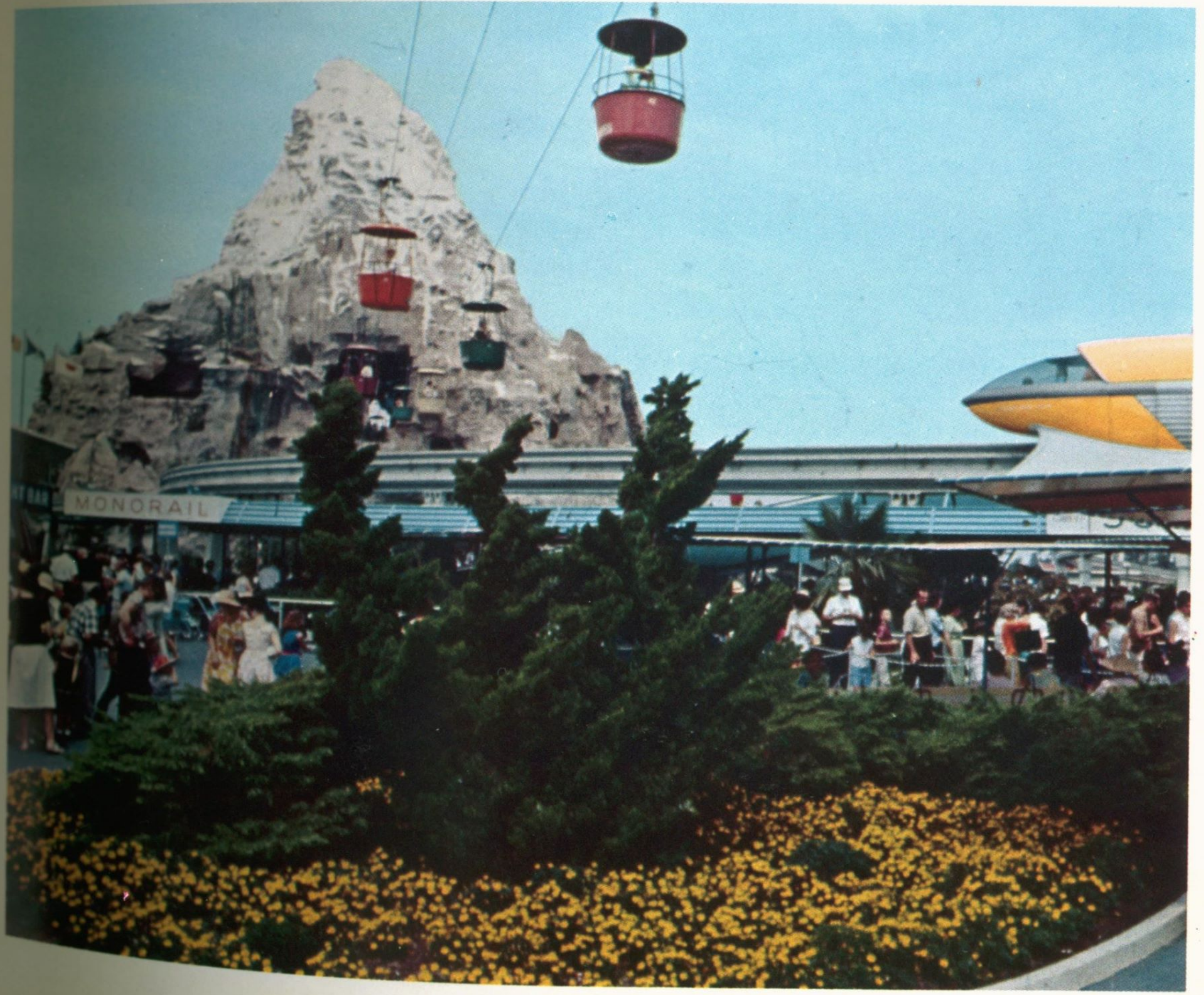


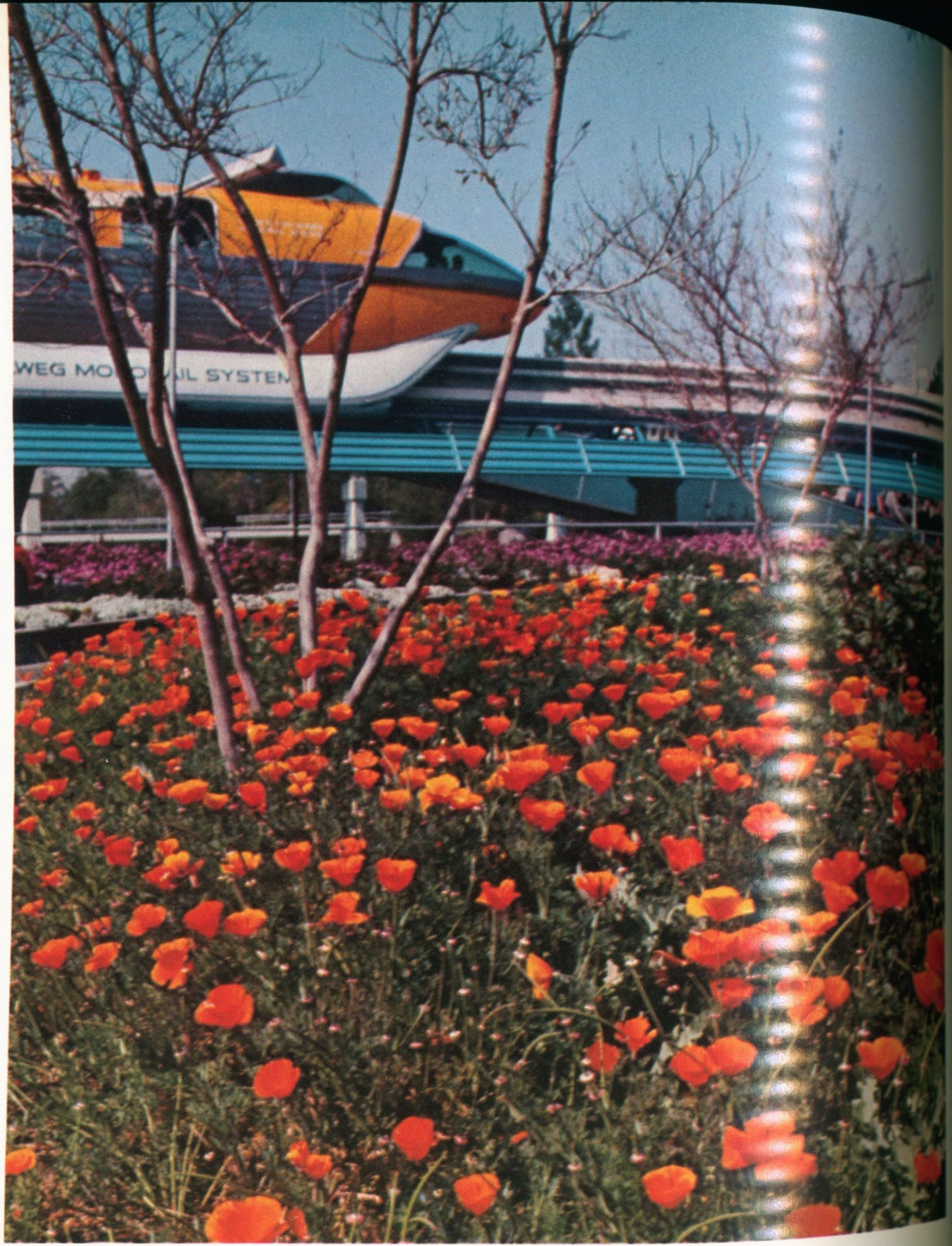
In this view the planter islands of Tomorrowland are abloom with giant white pansies. Also pictured are two species of the African bird of paradise plant: the familiar orange-flowering variety is in the foreground, and in the background is the palm-like giant which bears king-sized blue and white blossoms.

apparently have no common name, perhaps because they were unappreciated and uncultivated at home. We are inclined to count this oversight as a blessing—vernacular names originating in Africa, India or China might well prove more formidable than such familiar scientific designations as hibiscus, eucalyptus and azalea.

Vernacular names also vary with locality and in the long run are far more confusing than the world-wide Latin terminology. Acacia in Australia, for instance, is called "wattle"; in France it is known as "mimosa." In the southern United States, on the other hand, "mimosa" refers to Albizzia julibrissin, which in other places is called "Persian silk tree."

Near the entrance to the Monorail is Chinese corkscrew juniper, ringed by dwarf French marigold and backed by Juniper Pfitzeriana.





Motorists on the Autopia freeway drive through dazzling fields of native California poppies in the spring. In the summertime, after the poppies have stopped blooming, the crape-myrtle trees in the scene will display a canopy of pink flowers. In the background is a bank of trailing lantana.

Actually, mimosa is a scientific term—the botanical name of an entirely different genus!

But back to the Space Bar and another plant with a Latin name. On each side of the dining terrace you will see a curious tree called "star pine" (Araucaria excelsa). It comes from faraway Norfolk Island in the south Pacific, where it is known (not surprisingly) by yet another name, "Norfolk Island pine." It is not truly a pine, but a sort of second cousin. If you are a tree and have needles, and your seed is borne in cones, it's all in the family—the conifer family.

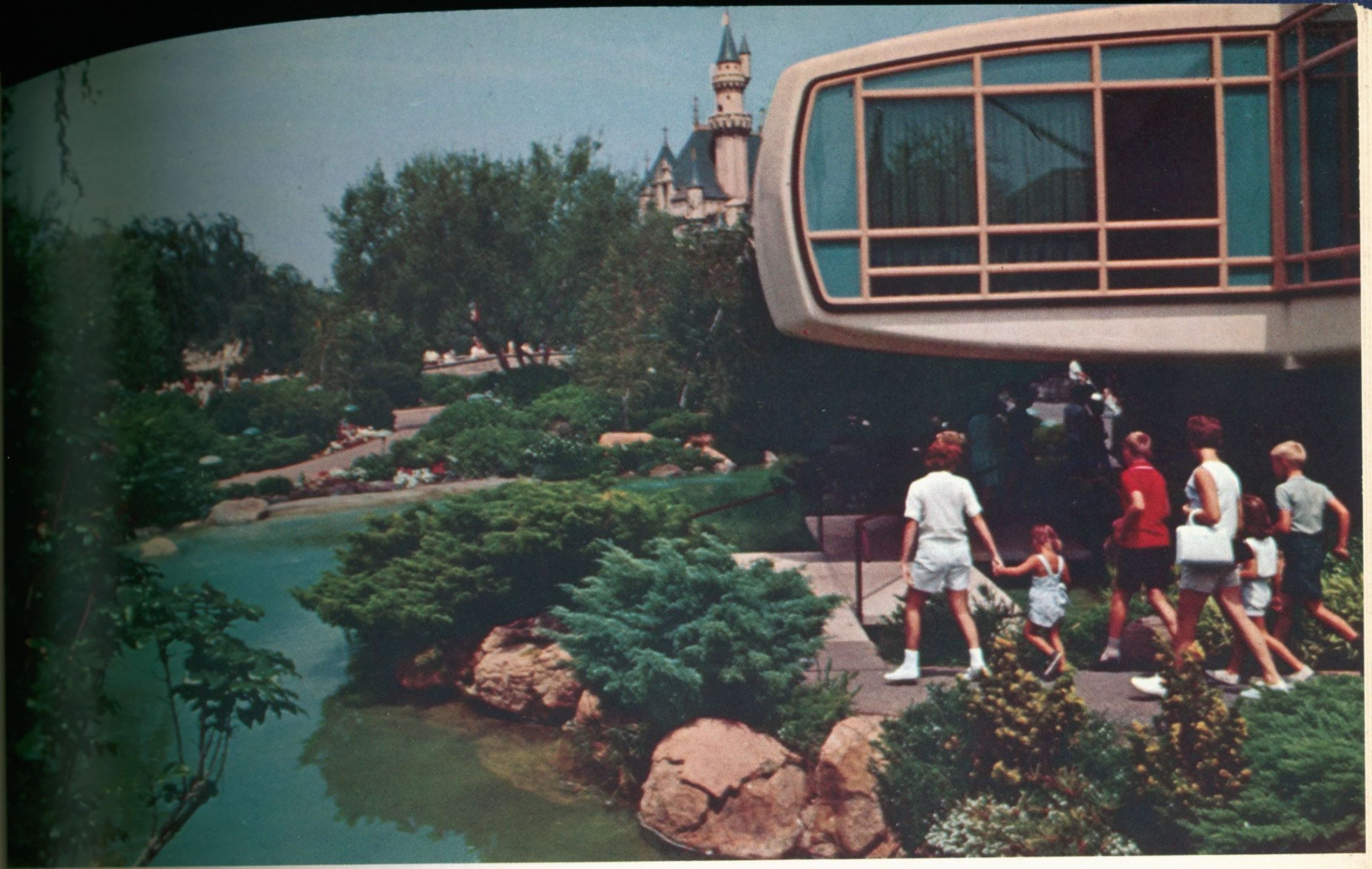
Many years ago, when British men-of-war depended on sail power, these same star pines were highly prized as mainmasts. Straight and strong, they grow to heights of 200 feet. More recently the trees played a leading role in "Tales of the South Pacific" by James Michener. The story of a stand of stately Norfolks,

A living fossil, this cycad, popularly called a sago palm, is a relic from the Mesozoic period. This 50-year-old specimen grows near the boarding ramp to the Monorail.

cut down by the Navy to make a landing strip, is a fascinating chapter in the book. The profile of these trees, especially the young ones at Disneyland, is so symmetrical as to appear almost artificial. This quality has also made them a favorite subject for the florist as a pot-grown living Christmas tree.

In the opening lines of this chapter we mentioned that Tomorrowland links past, present and future. In the chemistry exhibit, for example, one learns that modern synthetic fibers are in many cases derived from coal formed millions of years ago. So it seemed not inappropriate to situate a cycad specimen directly at the entrance to the Monorail.

Rich, multicolored coleus, an effective and dependable bedding plant in partial shade, presents its beauty in the leaves rather than in the flowers.



The Monsanto House of Tomorrow rises from a contemporary garden scene featuring pools, lichen-covered boulders, junipers, miniature bamboo, azalea, and various oriental plants.

This curious palm-like plant, popularly though incorrectly known as the sago palm, is in effect a living fossil. It existed in the Mesozoic period some two hundred million years ago. Its neighbors from that era have long since disappeared, but some extraordinary tenacity has enabled Cycas revoluta to survive, a truly remarkable feat when one pauses to consider the changes the crust of this earth has undergone in that vast period of time. A nearly extinct reproductive mechanism, one of nature's early and long-since superseded techniques, triggers a strange annual flower followed by orange seeds the size of chestnuts. Our 50-year-old specimen is still observing the ancient system.

Next door to the cycad is a large specimen of "flannel leaf" and an arborescent Philodendron Selloum. Most philodendrons are tree climbers (hence the name, which in Latin means "lover of trees"). Unlike most species, Selloum does not require tree support—it builds its own trunk. Here is another example of an exotic plant known only by its proper scientific name; it brought no common name from Brazil, its original home.

Disneyland's submarines voyage through a tropical coral reef and disappear into a vast sunless cavern. This cavern is designed with a reinforced concrete roof engineered to support not only itself, the Autopia roadway and sections of the Monorail, but a complete landscape scene which envelops the Autopia miniature freeway system. Grass, wild flowers, flowering shrubs, and trees (including 35-foot

Yucca and Australian spear lily, seasonally highlighted by cockscomb and verbena, greet visitors to the Space Bar.

pines) spread competing root systems in the relatively shallow earth which overlies the cavern roof. There is no need to dwell on the problems which confronted the landscape department in this instance, but home gardeners who have had experience with "hardpan" will be sympathetic.

Crape-myrtle trees line the Autopia freeway, with lantana and gloriosa daisies planted in the dividers. Bermuda, or "devil grass," a common scourge in California, soon invaded the rolling terrain of the Autopia setting. We have been obliged to accept, in fact pamper, this problem child. Applying the "if you can't beat 'em, join 'em" philosophy, we feed, water, and even occasionally manicure our devil grass.

Autopia's spring theme might well be, "Take a ride through the California poppy fields," for in spring and early summer the Autopia is banked with a colorful display of these and the larger peony poppies.

The path along the edge of the submarine lagoon leading to the Matterhorn is lined with Pittosporum rhombifolium (again this plant has no common name). It is an import from Australia, with trim evergreen foliage. Its modest rate of growth makes it a good choice where a small tree is desired. A bonus feature is the decorative orange-colored seed crop displayed for many weeks in the fall.

Next door to the submarine fleet we find an armada of motor boats, and much of the living wall around the Motor Boat Ride is composed of oleander, a mainstay of warm-climate gardening. Native to the Mediterranean, it is equally at home in such diverse climates as Phoenix and Waikiki Beach. In Disneyland it is generously employed in the landscape both as a summer bouquet and for functional screening.

Oleanders are rapid growers and can be trained in various forms, either as shrub, hedge or tree. They come in a wide range of colors, but at Disneyland we use only pale and dark pink, along with the fine white flowering type, these being the most showy and productive varieties. There are single and double flowering types, the former more desirable on the whole, since they shed the dead blossoms; double flowers cling to the plant and necessitate clipping for trim appearance.

Though young growing plants benefit from ample water and fertilizer, a full-grown specimen can exist with surprisingly little of either. The oleanders which border our parking lot, for example, are irrigated only two or three times during the summer, but remain a faithful and undemanding source of color for five months out of the year. This plant, known to

"Disneyland's roof garden" aptly describes this area of Tomorrowland, where a forest of large trees flourishes in a thin layer of soil atop the concrete roof of the submarine cavern. Growing happily on the "hardpan" rooftop is an Australian silk-oak (center); evergreen ash, Monterey pine and liquidambar.

Oleanders bordering the Motor Boat Ride provide a colorful floral display and separate the boat ride from adjacent activities.

have toxic properties, is admittedly taboo for human and animal consumption; yet it is deservedly one of the most popular and commonly employed plants in southern California.

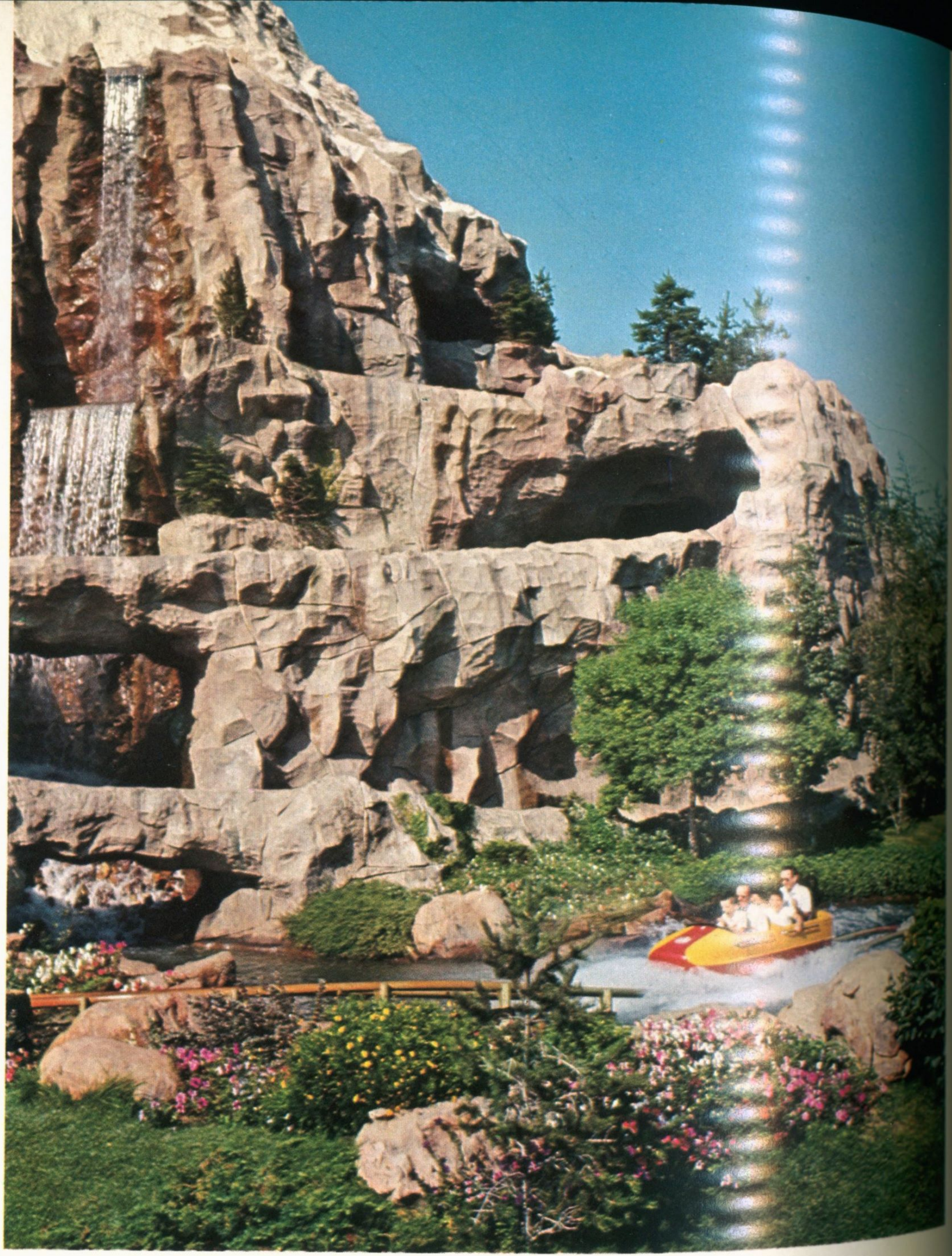
Across from the submarine and motor boat waterways is a mountain, the highest point in the Park. Disneyland's Matterhorn is actually a 1/100 scale model. The 14-story structure is built of steel, reinforced concrete and four acres of hand-troweled cement "skin," finished off with a coat of glistening snow.

The debut of Disneyland's Matterhorn, complete with television coverage, was scheduled far in advance. The landscaping people were allotted two weeks to complete their work on the mountain. But the best laid plans of mice and men . . . well, you know how it is. By the time the last artisans had cleared away their scaffolding, only three days remained until the televised opening. The planting you see today was accomplished in those 72 hours. The chore included the installation of 10,000 flowers in full bloom!

If you look up toward the peak of the Matterhorn you will see small trees clinging to the mountainside. They may look like pine trees, but they're not. Pine trees wouldn't do for this assignment. They grow too rapidly, and the size of their needles is out of scale in the setting. Colorado spruce seemed the best solution, so we found small trees in poor situations high on native mountain slopes, and we brought them to Disneyland. The trees were already stunted, and since arriving at Disneyland, they have been content to grow in a few shovelfuls of sawdust tucked into a pocket of concrete. They are watered regularly and fed periodically with liquid nitrogen.

The installation process is a story in itself. A crane with a 130-foot reach deposited a large steel bucket at the base of the mountain. Into this bucket was shoveled the sawdust mixture. On top of this went a selection of small spruce trees. A gardener climbed aboard and, at a signal, the whole load—bucket, sawdust, trees and gardener—ascended to the designated ledges. As the bucket hovered alongside the mountain, the gardener disembarked, filled the hatbox-sized planting pocket with sawdust, carefully tucked in the spruce tree and boarded the bucket again. Up a few feet he went for another planting, then down to the ground for more trees and sawdust to repeat the operation.

Healthy plants growing in small containers are common in Disneyland—the potted plants along Main Street, the conifers on the Matterhorn and the tropical plants growing in lava rock behind the Pirate Lagoon are just a few examples. This is a concept that might be adapted by owners of hillside homes in southern California. Many homesites have been cut from mountain slopes, leaving walls of barren rock which could accommodate pockets for

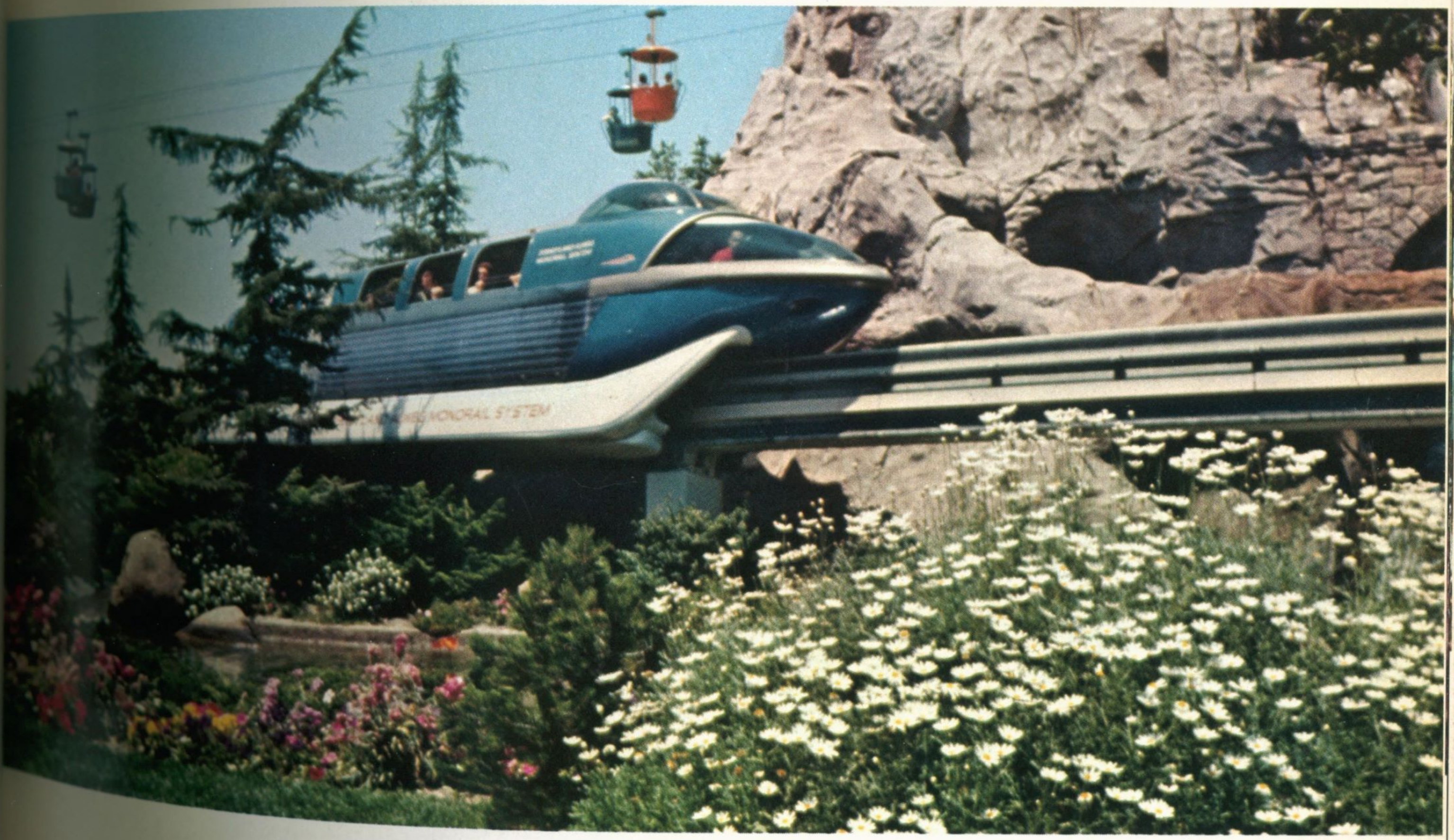


What does it take to simulate an Alpine scene in Anaheim, California? In our sub-tropical climate we attempted to create the illusion with a Disney-designed Alp and plantings comprised of Colorado spruce, European birch, Chinese tallow tree, juniper, Japanese honeysuckle, California baccharis, and assorted annual flowers.

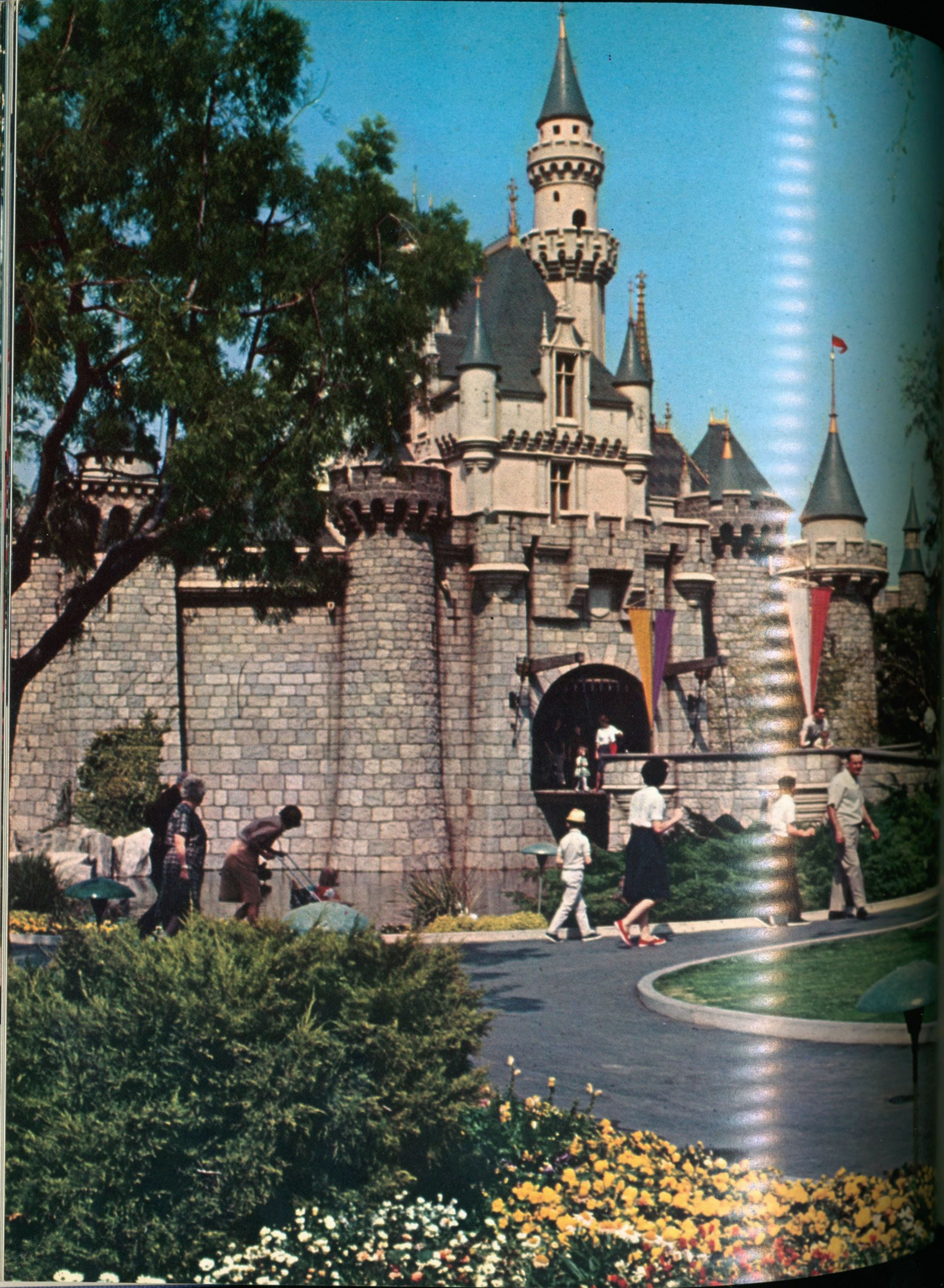
leafy green plantings. In the hot summer months, of course, water can be critical and may be required daily.

A ride through the Matterhorn on the Fantasyland-Tomorrowland Sky Ride will give amateur horticulturists a close-up of these special mountain plantings. It also presents a good "long view" of the Park's topography which should not be overlooked. Another good source of the long view is the Monorail, which snakes above Tomorrowland. Passengers on the Monorail see woods, lakes, rivers, mountains, waterfalls and tropical lagoons from a totally different perspective.

At the base of the Matterhorn one finds an international garden. There are Colorado spruce, Chinese abelia and tallow trees, European birch, deodars from India, blue daisies from South Africa, creeping fig from Australia, sweet gum from the Gulf states, mountain lilac from California, bluegrass from Eurasia by way of Kentucky, Mexican marigold, Iceland poppy, Japanese honeysuckle, and the popular petunia that calls the whole world its home.



At the foot of the Matterhorn is a cosmopolitan grouping, with marguerite from the Canary Islands, European stock, Mexican marigold, Iceland poppy, English holly, Chinese abelia and Himalayan deodar.



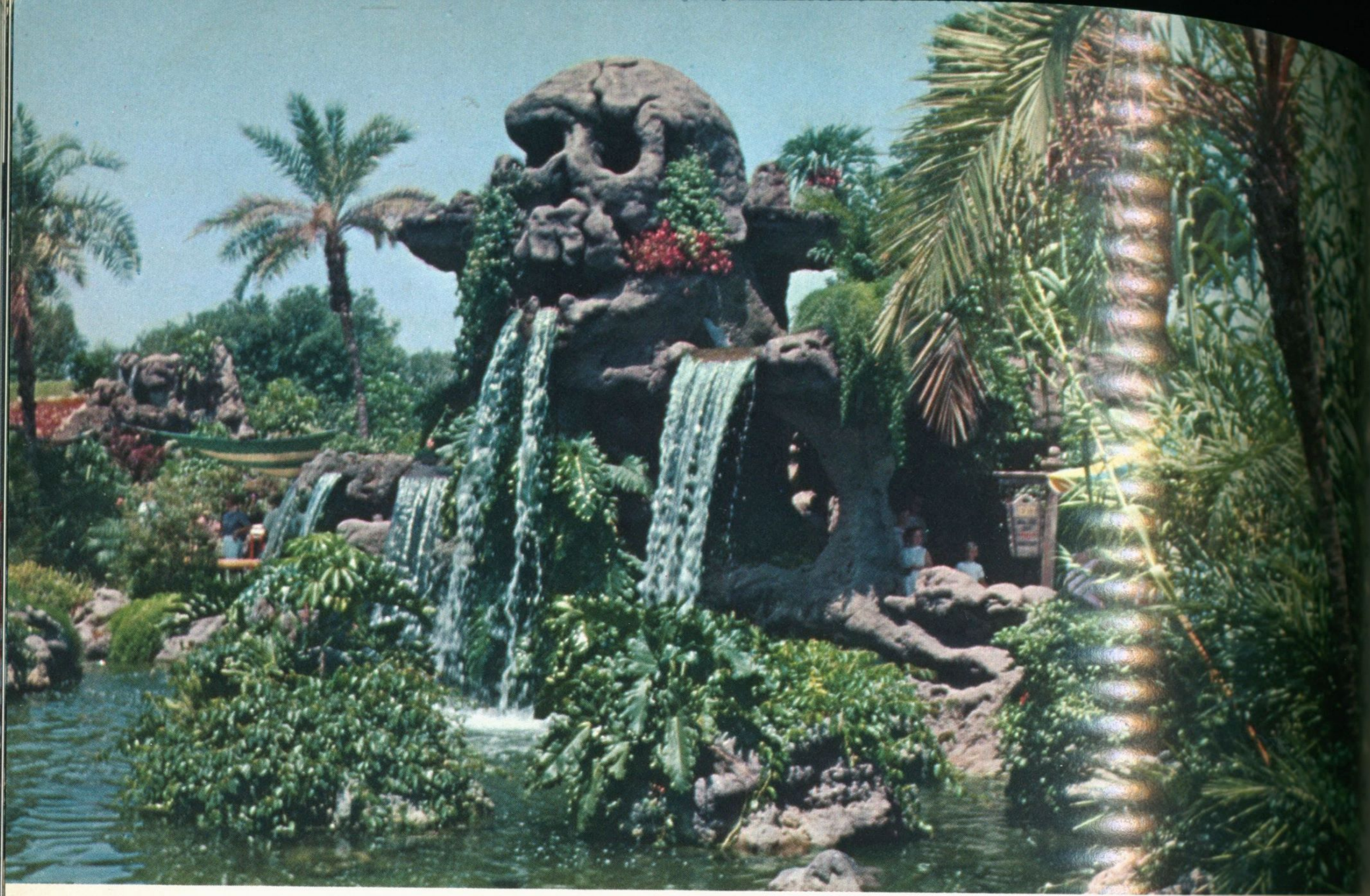
Fantasyland

Over the moat and across the drawbridge of Sleeping Beauty Castle is Fantasyland, where storybook tales come true. From the castle courtyard you will not see many plants, but just beyond the Mad Hatter's spinning tea cups lies the tropical Pirate Lagoon. Behind it is the miniature Storybook Land, immediately to the left is a Swiss chalet perched in an Alpine backdrop, and on the near horizon is the sheltering tree-covered berm shutting off the outside world.

The authentic firs and pines of the Alps are not available to us in California, and we were obliged to search for reasonable facsimiles. These we found in deodars, native to the Himalayan mountains, but with a skyline silhouette that at a little distance serves the purpose well. In the shade of these trees, miniature dianthus, daisies, columbine and ferns contribute to the mountain mood.

Just a few steps away we dipped our landscape brush into a different palette to paint the setting for the pirate ship. The waters of this tropical lagoon would be lined with graceful coconut palms if such were possible. Unfortunately, coconut palms, like shower trees and royal poincianas, are a little too tender for our southern California climate. Tropical Africa, on the other hand, has given us a very handsome palm with many of the attributes of the coconut, including a disposition to send its trunk aloft in a soft curve. This substitute, the Senegal date palm (Phoenix reclinata), grows quite rapidly when young, but many years are required to produce a 15 or 20 foot trunk. The only sources of suitable trees are the old residential gardens and, as these reclinata palms are highly prized by landscape architects, there is a waiting list for all the old specimens that become available. A diligent search from San Diego in the south to Santa Barbara in the north finally produced the required number of palms which now adorn the Pirate Lagoon and rise in graceful silhouette against the sky. Planted as companions are three palms from Mexico and tropical America. Two have fan type leaves, one blue-gray, the other green. The third is a feather- or plume-palm which is quite rare in this country.

Palms are classified by botanists into two basic groups: fan-leaved or feather-leaved—and, in addition, as armed or unarmed, meaning with or without thorns. The aforementioned plume-palm (Acrocomia totai) is distinctly armed, with long black spines distrib-



The Pirate Lagoon captures a sinister tropical atmosphere with the ingenious combination of volcanic rock and bold plant material. Dressing the set are Senegal date palms, giant philodendron, evergreen grape and bamboo.

uted not only all over the trunk but extending out to the leaf stalks and even the flower stalk. Mother Nature's idea may have been to discourage small animals from taking the seed before it was ripe. If you will examine the tree at the west end of the pirate ship we think you will agree she did a good job; you may be sure that our gardeners treat this palm with respect!

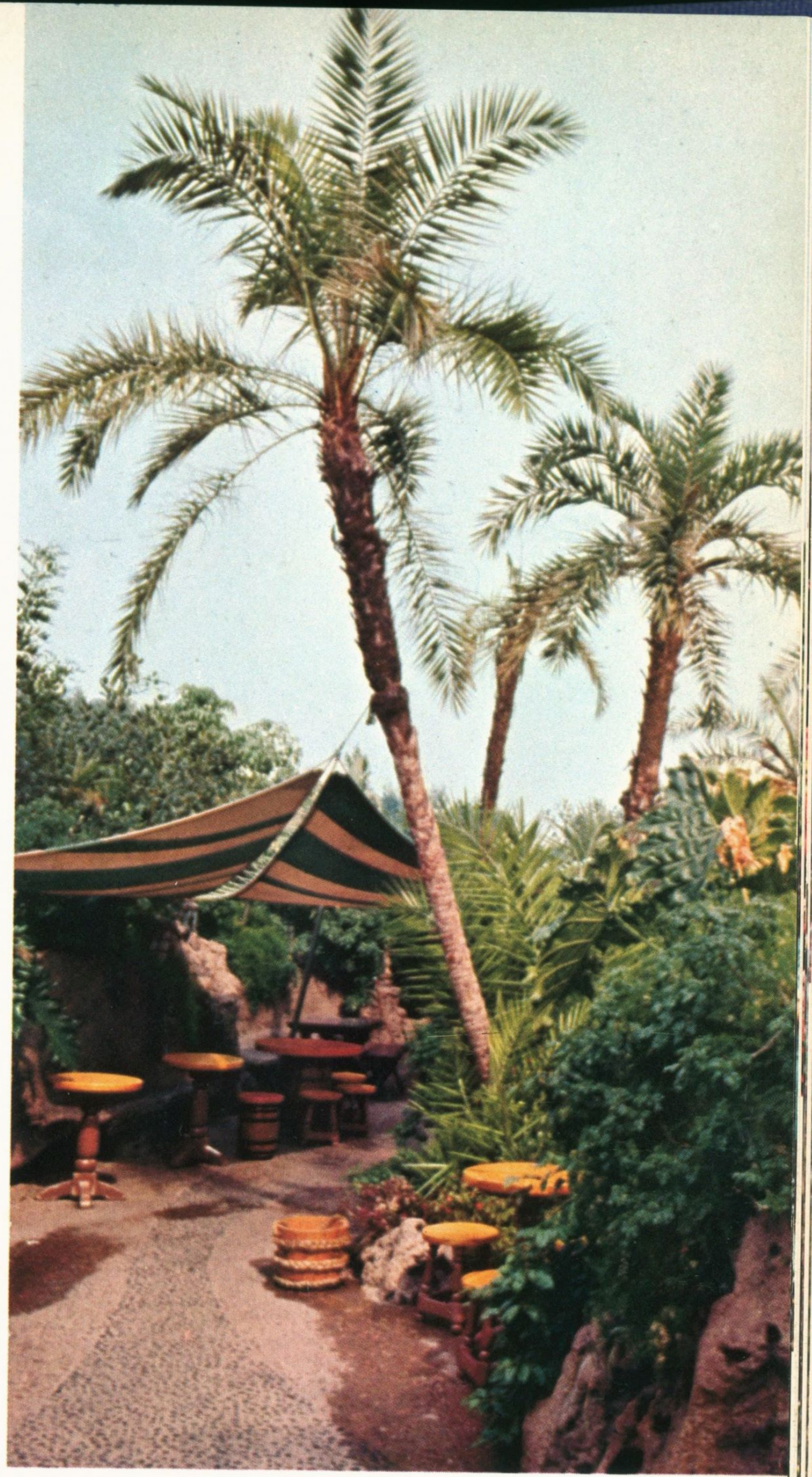
The simulated rock and grotto walls which enclose the Pirate Lagoon on the north are provided with small openings where many varieties of tropical plants have adapted to a rather strange existence. These pockets, averaging twelve inches across, were filled with redwood sawdust into which the root systems of the plants were shoehorned.

Many of the philodendrons have sent probing roots, octopus-like, seeking nooks and crannies in the artificial rock and, strangely, deep into the waters of the lagoon, unmindful of the chlorinated water. It is most difficult to grow plants in an area where the foliage is constantly drenched with water. Even water lilies manage to keep the surface of their leaves dry. The giant philodendrons which grow under the waterfall tumbling from Skull Rock not only survive the continuous chlorinated bath, but actually seem to enjoy it. None of the ferns or other companion plants lasted more than a few weeks under these conditions.

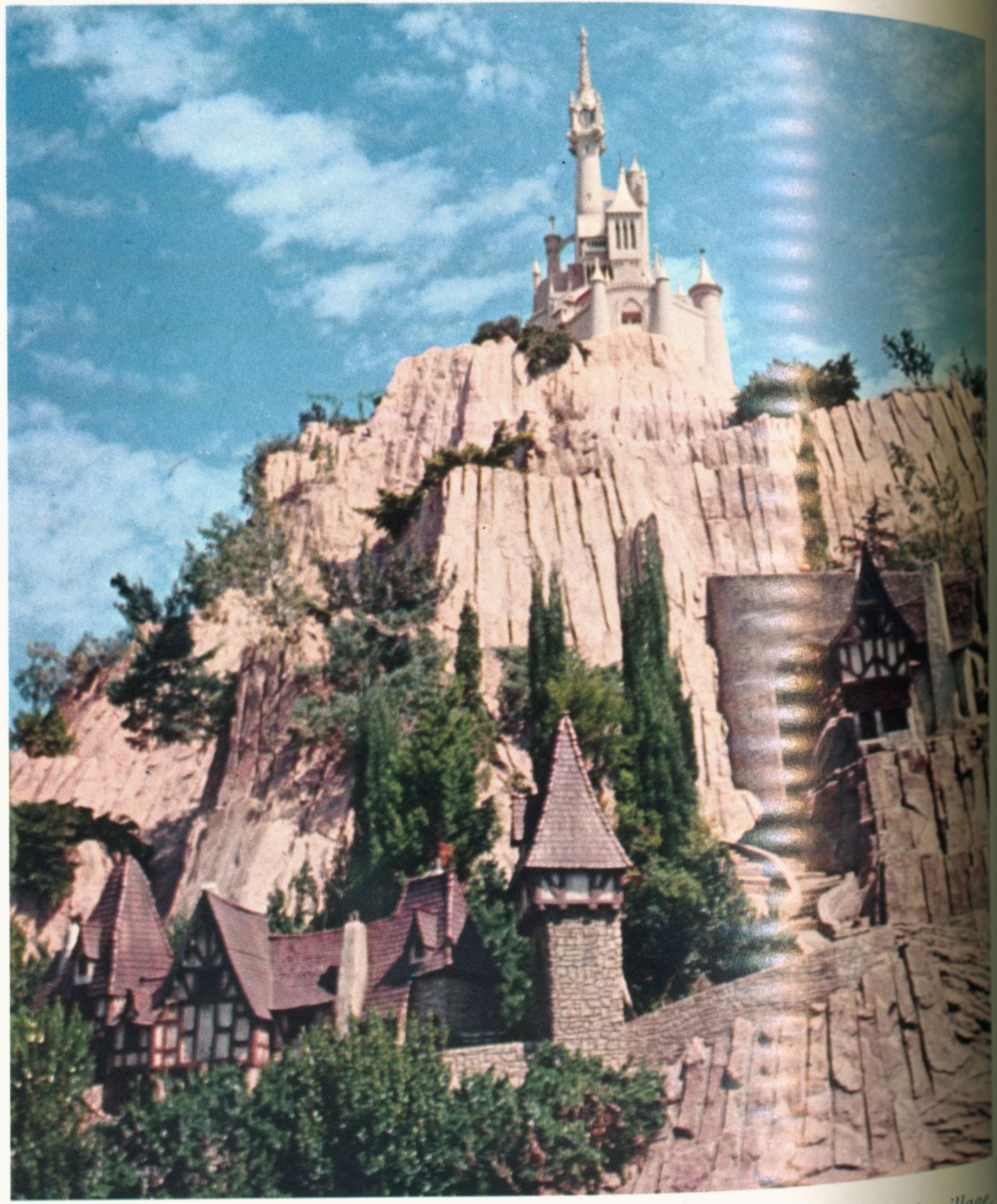
At the east end of Pirate Lagoon we may board a small boat for a voyage through Storybook Land. The scenes here are constructed on a one-tenth scale. Conventional landscape treatment would soon have swallowed up all the little houses. Japanese bonsai culture might have provided a solution, but it would have been prohibitively expensive to cover the entire area. Instead, plant material with very small leaves and a relatively slow rate of growth was selected and planted without removing the roots from the containers. Normal growth was thus inhibited and, although in some cases containers disintegrated after four or five years, most of the plants have been permanently retarded. Even so, our gardeners must devote five times as much attention to pruning here as elsewhere in the Park.

Next to Geppetto's shop stands a 20-year-old cypress tree scarcely 18 inches tall. The scaled-down forest pines sheltering Snow White's cottage are from 100 to 150 years old and about twelve feet high. The cypress was a hobby plant acquired from a San Diego gardener; the pines are natural dwarfs brought to Disneyland from Mendocino County five hundred miles away. A small colony of pines there, growing under difficult circumstances for countless generations, have evolved a dwarfed character which is now apparently fixed, even when the trees are removed from that particular environment.

Arrangements were made to purchase, package, and transport a dozen of these trees to Disneyland. Before planting in the Snow White scene, special soil, as nearly as possible



Beyond the Pirate Ship, gently curving Senegal palms support shading canvas. Cascading rock plants are African tecoma, asparagus fern, abutilon, philodendron and evergreen grape.



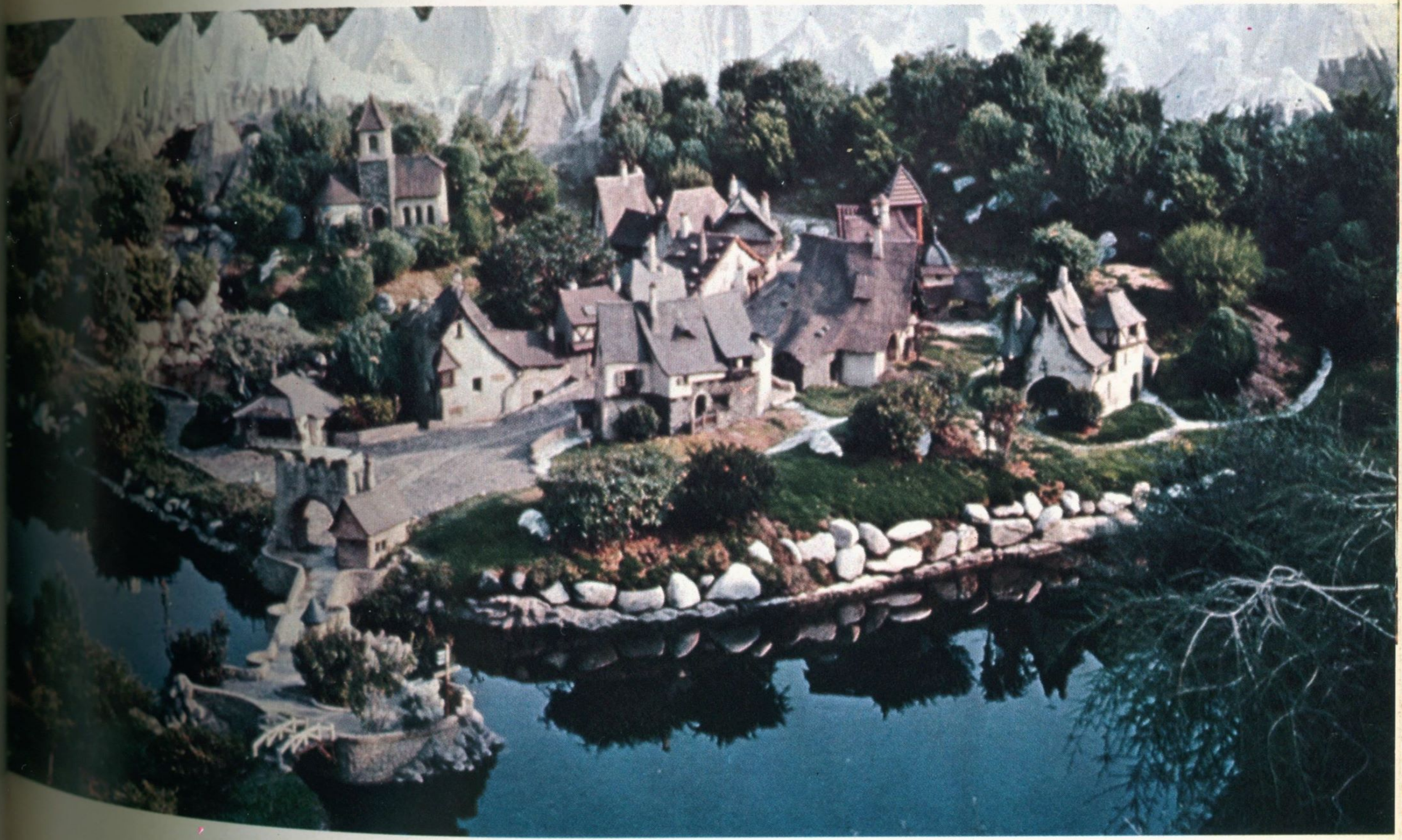
Cinderella's castle soars above a tiny fairytale village. Italian cypress trees, Japanese boxwood and juniper are confined to original pots (buried in the soil), so that they will remain in scale with Lilliputian buildings.

like that from which the pines were removed, was laboriously substituted for the existing sand. Then the trees were carefully tucked into place. Only one or two failed to survive the transplanting and the balance are growing happily, but slowly. Oh yes, the name of these trees is Pinus contortus, variety Bolanderi.

Here, in miniature London Park, the weeping willow trees are actually stunted Pittosporum phillyraeoides and the grass is Irish moss. In the Old Dutch Mill scene the grass is truly a grass, Korean grass.

The little forest growing behind Geppetto's village is still trying to fight its way out of the flower pots in which it was first planted. From time to time an individual will succeed, outgrow its neighbors, and be banished for its trouble, its place to be taken by a youngster in a smaller pot. The gardeners in Storybook Land have learned to step lightly, squeeze into tight places, and think small.

Although viewed only from the excursion train, a topiary garden is properly part of Fantasyland. Here you will find giraffes,



Geppetto's village in Storybook Land, built to one-tenth scale, is landscaped with stunted trees and shrubs. Diosma, dwarf myrtle and conifers provide the basic plant material.

Flowering peach, fronting Sleeping Beauty Castle, heralds the first day of spring at Disneyland.

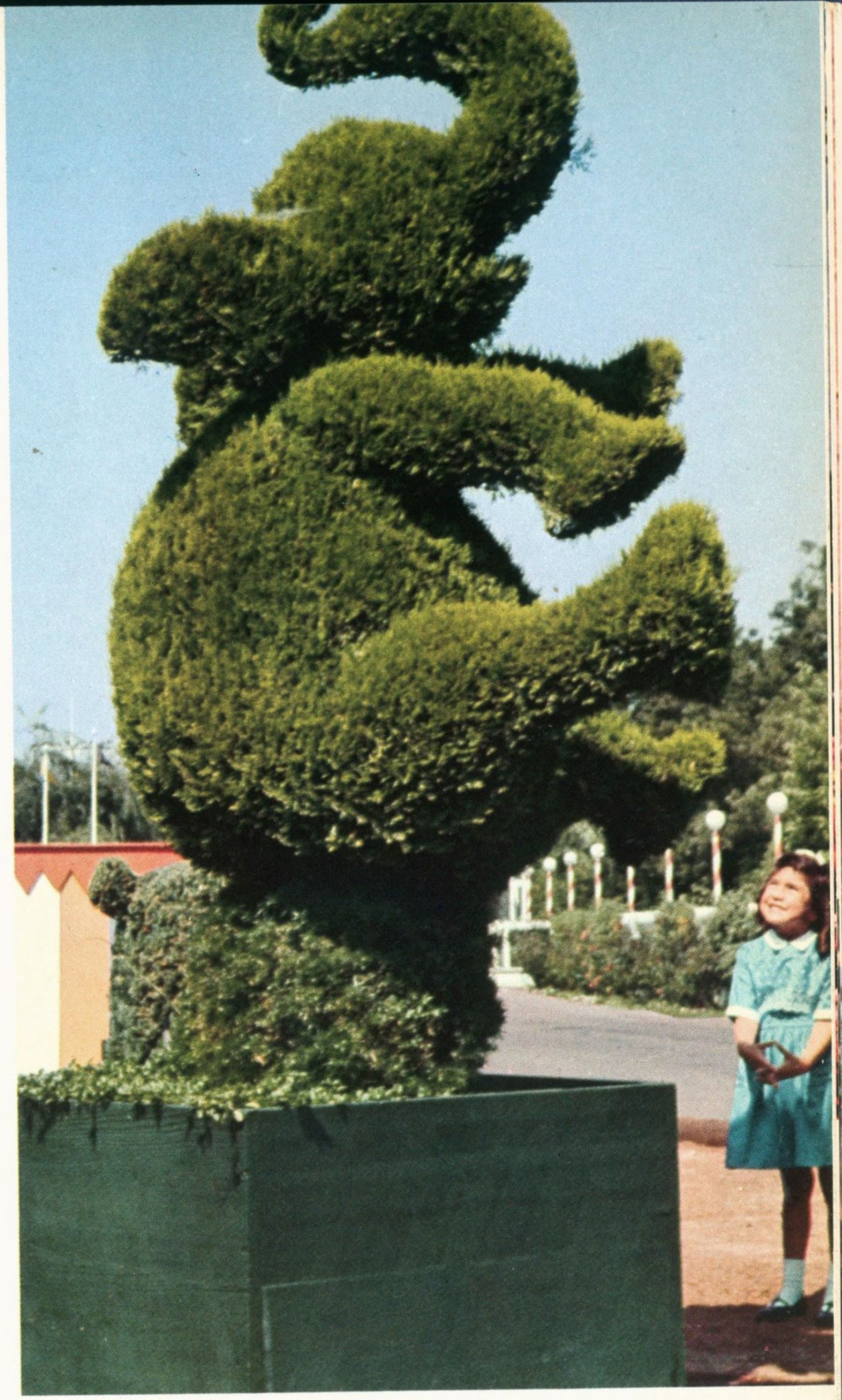
camels, elephants, and waltzing hippos, motionless, but alive and well. This inanimate zoological garden is made up of thuyas, junipers, cypress, ficus, and African boxwood.

Topiary, the art of sculpturing in living plants, has been practiced for many centuries and was brought to a fine polish in Europe a hundred years ago. As it was then managed, topiary gardening had one essential ingredient, time. Plant varieties with small leaves, slow growth, and long life were required; boxwood and yew trees were the favorites.

At Disneyland we didn't have the time, so we devised other methods of topiary gardening. Over-simplified, these amounted to lifting old plants out of the ground, confining their roots to containers and persuading them to assume shapes they hadn't planned on. For example, a camel with four feet on the ground requires four individual trees, and you draw straws to see who gets the neck. On the other hand, if the hippopotamus is poised on one toe the problem is simplified, providing you can produce enough plant above that point. Now that our chlorophyll circus is past its growing pains the gardeners who bent, tied, clipped, and manicured the troupe can relax a bit, but only a bit, because these animals lead a somewhat precarious existence. It is possible to kill these plants with kindness. Overwatering is quite as dangerous as underwatering.

Having in mind that beauty is only skin deep, we are understandably concerned with the welfare of our animal charges. Too much water, too little water, too much fertilizer, too little pest control, could materially damage or destroy 24 months of hard work.

Topiary gardening can be lots of fun. You may wish to attempt it in your garden at home, but don't take it lightly.



The traditional art of topiary gardening is represented here by a laughing pachyderm fashioned from golden thuya, a relative of the juniper family. Disneyland gardeners are responsible for the care and feeding of this elephant.

Frontierland

A pine log fort with heavy timbered gates marks the entrance to Frontierland. Beyond the gates is a tribute to our American heritage—the *Mark Twain* stern-wheeler, the sailing ship *Columbia,* Fort Wilderness, an Indian Village and a frontier dance hall.

Just inside the Frontierland stockade we see the tallest trees in Disneyland, huge pines, soaring high overhead, almost 25 feet to the lowest branch. Juniper, strawberry trees and star jasmine share the scene, with old-fashioned perennials on the stream's edge. At the entrance are so-called scrub pines (actually Japanese black pines) selected for their irregular rugged contours and comparatively slow growth; at their feet is a natural drift of prairie grasses and western wild flowers.

In Frontierland itself, near the boat landing, the visitor finds himself in a small informal park boasting a unique specimen not on the original landscape program—a showy bougainvillea "tree." At one time an Australian tea tree (Leptospermum laevigatum) was planted here, selected for its fantastic trunk and branch structure. Unhappily, the tree, one of our few casualties, suffered a fatal injury in transplanting. Reluctant to discard the still picturesque skeleton, we converted it into a far more colorful flowering tree than nature had intended. This was accomplished by garnishing its upper branches with the scarlet tresses of a nearby bougainvillea. The result: a bougainvillea tree! At the top, a splash of color to delight the photographer six months of the year, at the bottom a favorite play structure for the children, as evidenced by the high polish on the hard wood.

A leisurely stroll along the riverfront carries one past evergreen elm trees, a red flowering crape-myrtle from China, cork oaks from southern Europe (the bark of which produces the cork of commerce) and a colony of southern magnolias which leads up to the old Haunted Mansion.

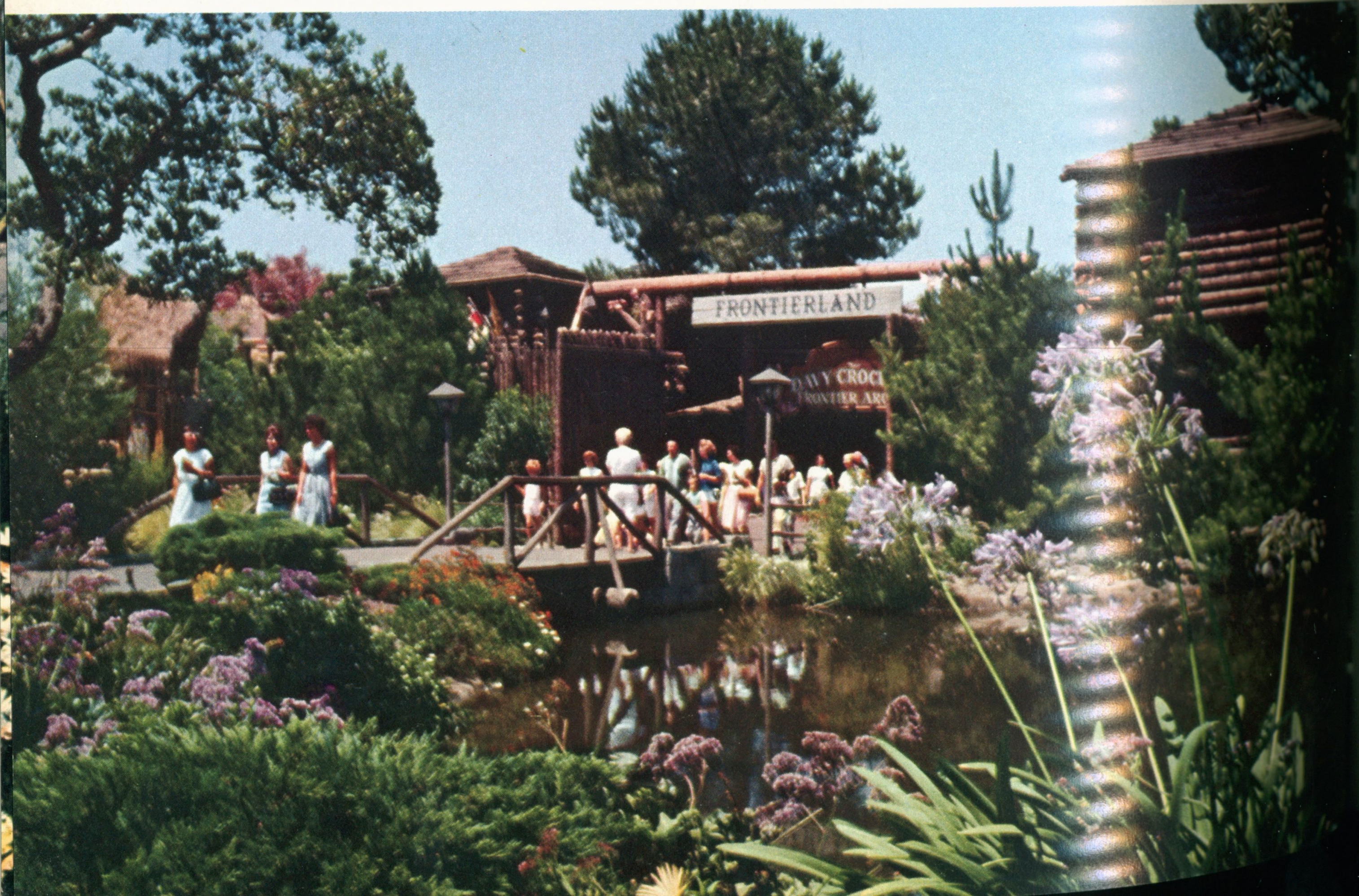
The flower beds of the New Orleans section are bright with pansies, Iceland poppies, and calendulas in the winter. African daisies bloom here in the spring, and in the summer there are multi-colored petunias.

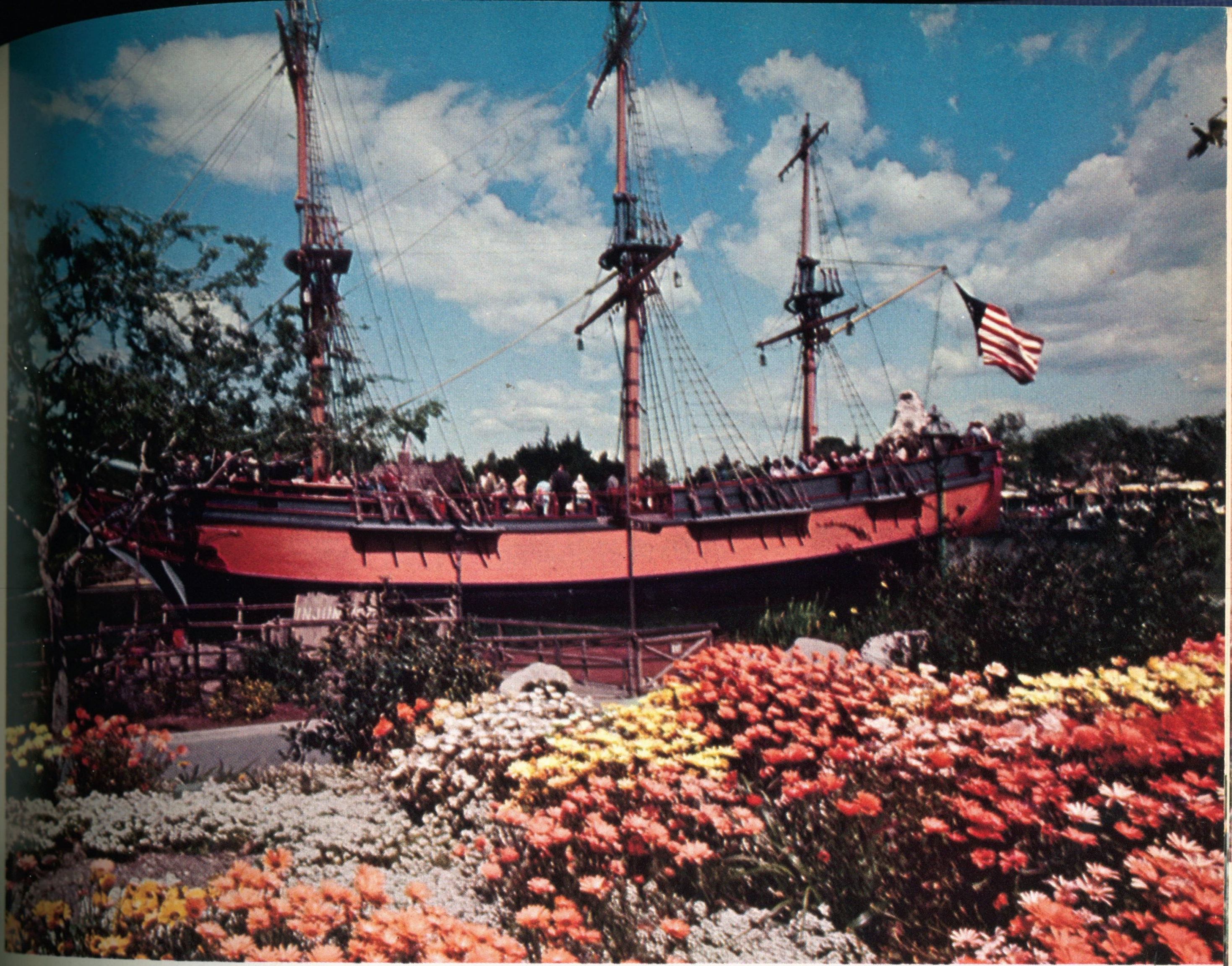
Interspersed throughout the flower borders are drifts of garden geraniums in bright colors which are rarely out of bloom. A dependable old favorite originally from South Africa, the geranium today is a man-made plant, artificially hybridized far beyond its wild ancestors. In recent years geraniums have fallen prey to a fungus which cripples without killing them. Plants are replaced every two years at Disneyland from carefully selected sources, and in this manner the disease problem is avoided.

The large rubber tree in front of Aunt Jemima's Pancake House still has a four-inch oil line firmly embedded in its root structure. One of the major oil companies presented this tree to Disneyland, but in the process of packaging the roots, we discovered that a large pipe carrying fuel under pressure passed squarely through the middle of the root system. The oil company very considerately shut down its operation, re-routed the pipe around the tree, and the task of moving proceeded. The original section of pipe remains today in the middle of the root system where the young tree had swallowed it up.

A cruise aboard the *Mark Twain* sternwheeler transports one into a wilderness country reminiscent of the Missouri frontier. Pines, alders, maples, cottonwoods and willows dominate a natural scene which a few years ago consisted only of orange trees. Some of the seedlings planted in 1955 have grown too fast for comfort. California alders planted as bare root whips with finger size trunks had developed 16-inch trunks by 1964. They had to be cut down with a chain saw and logged out.

This garden at the entrance to Frontierland is a transition between the Plaza's formal flower borders and rugged frontier country. In the foreground, left to right, are blue statice, Juniper tamariscifolia and lily-of-the-Nile. To the left is the strawberry tree. Lantana and pink fountain grass edge the water.

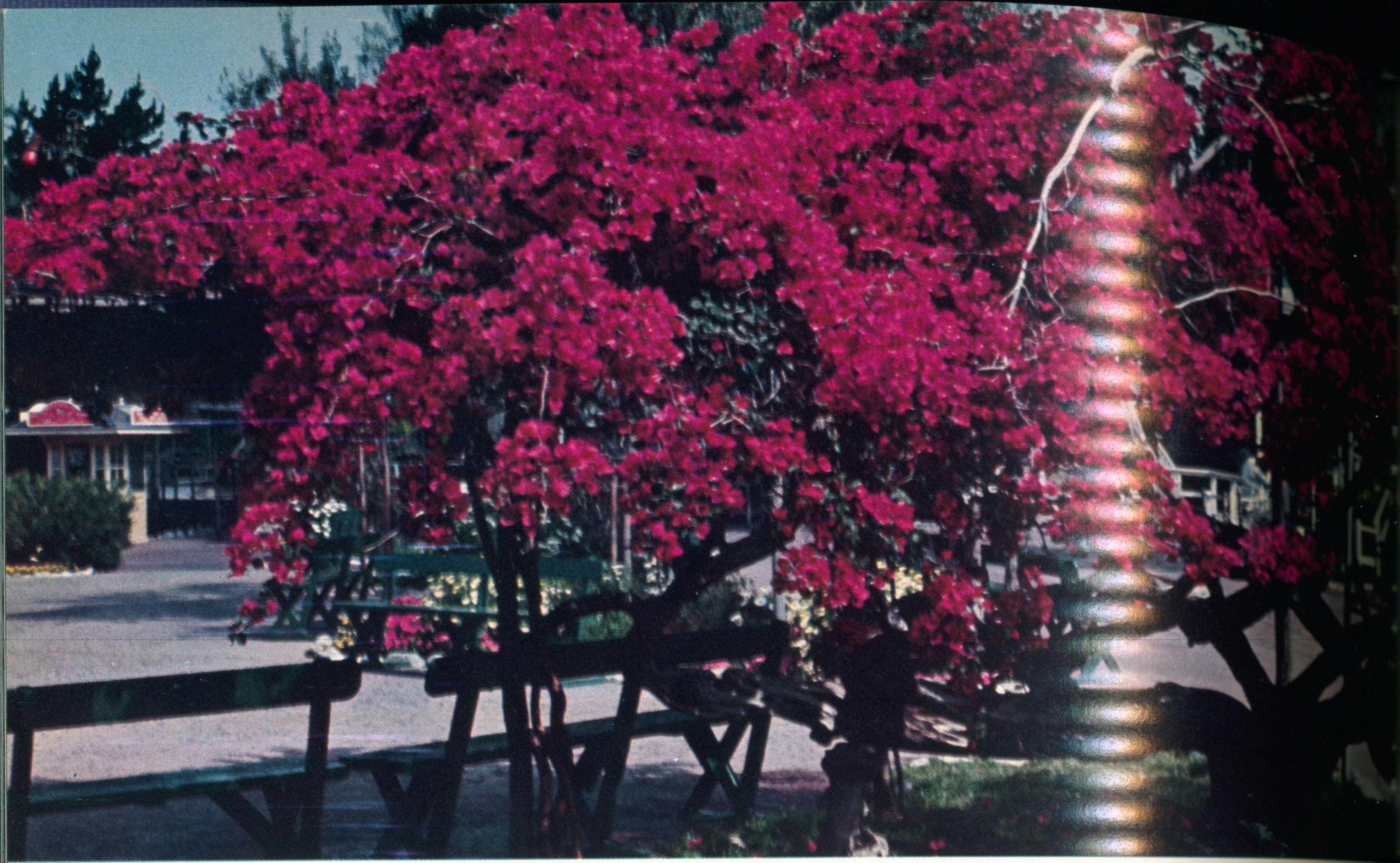




Were the daisies planted to match the Columbia? *Or was the ship painted to match the flowers? Intermingled with the colorful African daisies in this flowering border is alyssum, variety "Carpet of Snow."*

This wild country, which may also be viewed from the excursion train circling the Park, affords shelter to the mechanically animated moose, elk, and deer in lifelike groupings along the water's edge. Wild flowers and berry plants appear among the sunlit patches, and in the autumn the birch and liquidambar trees reflect their colors in the water.

This river, the largest waterway in Disneyland, is lined only with clay, and a serious scouring problem results from the sternwheeler passing so close to the earth banks. The wild European iris which line the shore resist the erosion of the water current almost as effectively as concrete. Unlike concrete, the iris offer a dividend of gay yellow flowers each spring. Iris pseudacoris moreover will not invade and clog the deep water, a liability present in many other species of aquatics. Among the flowers spreading over the New Orleans bend of the river are southern rose-



A composite "flowering tree" in Frontierland, this splendid bougainvillea is supported by the unique natural sculpture of an Australian tea tree.

mallow—some with eight-inch blooms!

One of the many interesting scenes from the river boats is a green island where we catch a glimpse of tangled growth and colorful wild flowers, a burning log cabin, streams and waterfalls, and a bona fide suspension bridge. The word and image of an "island" holds a special appeal for everyone, but Tom Sawyer Island, accessible only by raft from Frontierland, is a particular favorite of Disneyland's younger visitors.

Elsewhere in the Park there are streets and sidewalks underfoot, but on Tom Sawyer Island barefoot paths crisscross the wilderness. Here children of all ages can run free, explore Injun Joe's Cave, climb to the treehouse, plunge across the exciting suspension bridge, and negotiate the tricky pontoon bridge made of floating barrels.

The wild flora of the island includes pines, southern red cedar and sweet gum, Carolina cherry, sycamores and live oak. Honeysuckle and blackberry ramble unrestricted. Wild flowers crop out among the boulders and tall grasses. Rushes and waterside lilies (Crinum Americana) grow by the river bank.

So complete is the illusion of uncivilized country that a few visitors to the island have written letters of complaint to Disneyland. We consider these letters a distinct compliment. Believe it or not, we have been accused of harboring that scourge of the woods, poison ivy! We are innocent of the charge; there is no poison ivy on Tom Sawyer Island!

Disembarking from the river boat you may board a mine train for a journey into Nature's Wonderland. If you were an early visitor to Disneyland you will recall a stage coach and Conestoga wagon ride that departed from this same area and carried the traveler through pine-covered country, a sun-baked desert, and back along the tree-lined river shore. But Walt Disney was not satisfied with these rides, and he developed plans to re-design the entire area quite literally from the ground up. At Disneyland it is not unusual to re-do an entire scene extending over several acres—Nature's Wonderland is one example. It was rather like scraping all the pigment off a painting, pushing it back into the tubes whence it came, and squeezing it out again onto the same canvas, to compose an entirely different picture.

Scenes from "Bear Country," "Beaver Valley" and "The Living Desert" were carefully detailed on a scale model, and shortly thereafter the physical scene-shifting was put in motion. In practice this meant picking up all the pieces of a landscape—the grass, the shrubs, small trees and all the big trees and even the boulders, large and small. Time, space and manpower were at a premium and these needs, true to the old adage, gave birth to unusual procedures.

Trees of all sizes were lifted bodily from

In this view of Frontierland's river shore, multi-colored African daisies and sweet alyssum are quite at home in the California sunshine.

In Indian country, along the banks of the Rivers of America, are water primrose and fountain grass, European evergreen iris, and California and Italian alders.

the earth by giant bulldozers and transferred to the hooks of waiting cranes. Much of the earth was washed from the roots with fire hoses. The trees were then carted away to storage areas, where the roots were bedded in fresh redwood sawdust and tree tops were guyed to prevent them from toppling in the wind. After a sojourn of four months, the procedure was reversed, and the large trees returned to their re-shaped terrain, followed by smaller trees, shrubs, and grasses and... presto, we had a new landscape scene looking as if it had always been there!

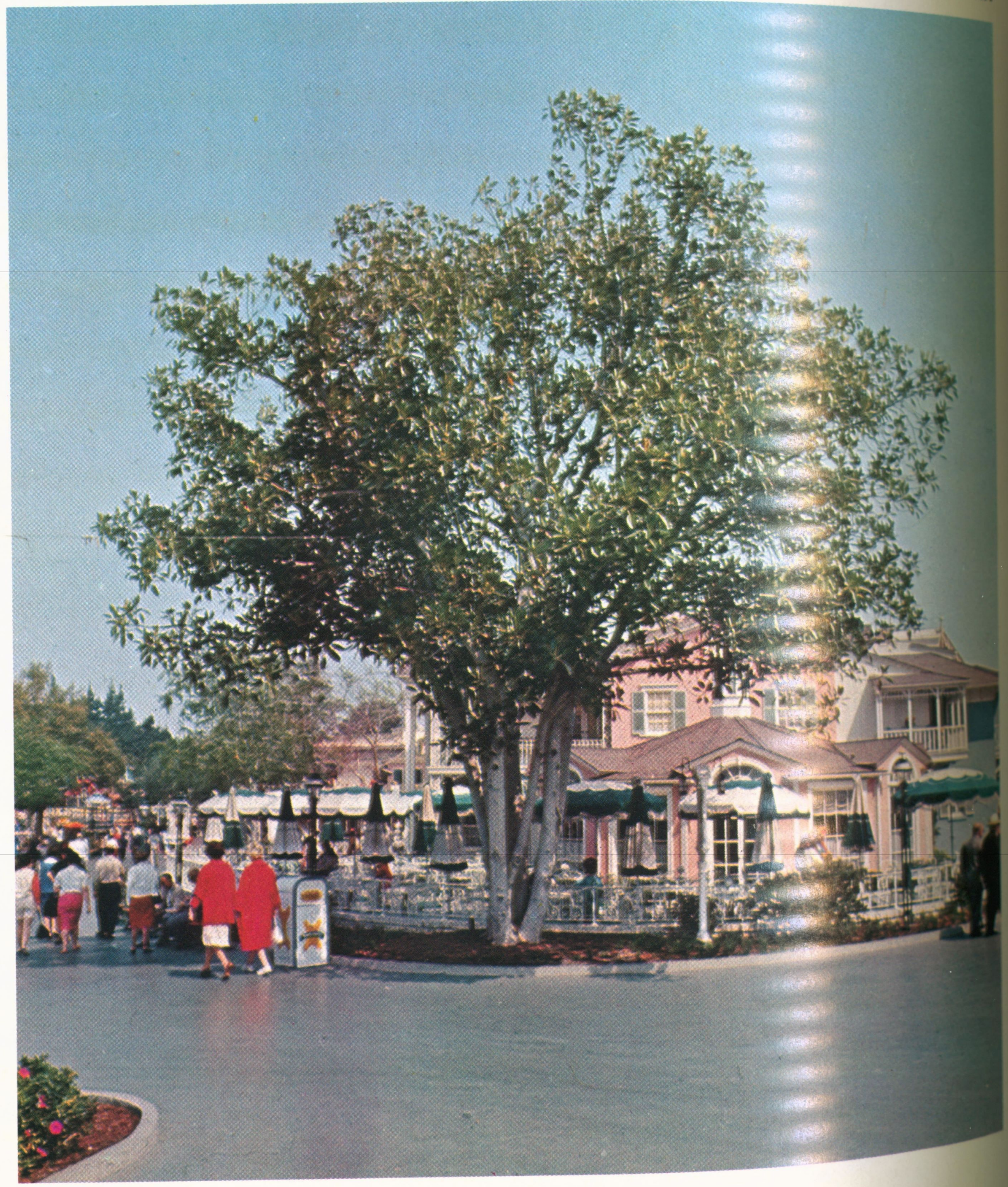
Moving trees weighing several tons is no easy job. It takes time, patience, skill and luck. One time-saving gambit consisted of boring a hole through the trunk of a tree and inserting a steel pin, by which the tree could be lifted with steel cables, causing no injury to the vital bark and cambium layer. After transplanting we removed the pin and replaced it with a section of hardwood, over which the bark soon healed as good as new. Pines, eucalyptus, acacias and silk oaks, to mention but a few, were moved by this method.

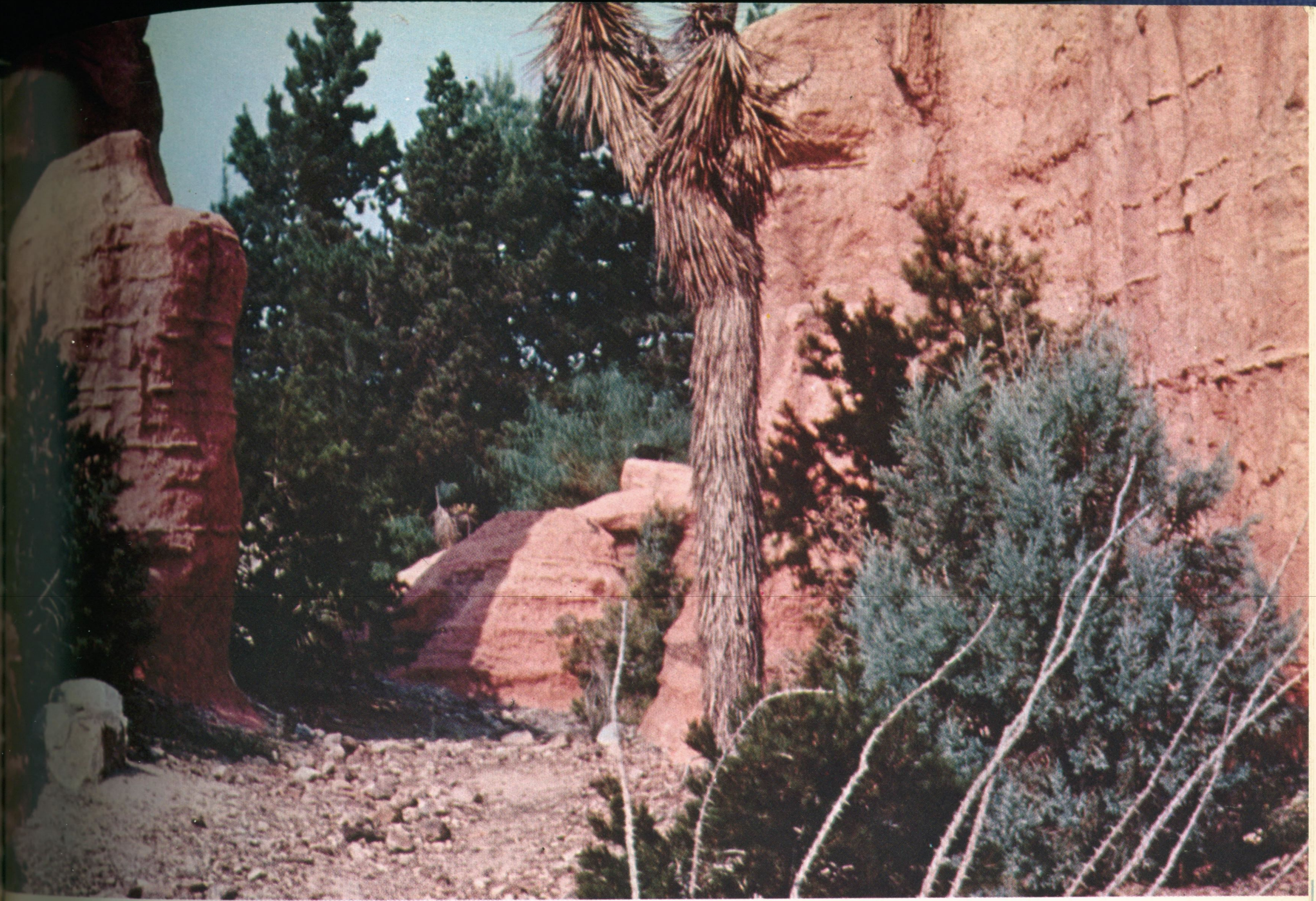
Four rubber trees destined for the New Orleans section of Frontierland present another interesting story of transplanting. Growing in the old Pershing Square in Los Angeles, they were declared unsalvageable and marked for destruction. However, in the nick of time, we obtained permission from authorities to attempt a rescue. Trucks and 80-ton cranes were moved in at 5 o'clock on a Sunday morning—the only hour the traffic department would grant a permit. The huge trees were trimmed by about a third, and even then they weighed ten tons each. Hoisted and swung aboard waiting trucks, they began to move in dawn's early light toward Disneyland. Halfway to the Park the trucks were stopped, however, for still another permit. The trees sat in the hot sun until Monday morning, when the proper papers could be obtained. They survived their ordeal, fortunately, and are now comfortably settled in their new home at Disneyland.

As the passenger on the Nature's Wonderland Railroad emerges from the first tunnel on the mine ride, he sees beavers at work on their local dam project. Pine trees framing the scene are a mixture of Montereys from California and Aleppos from the Holy Land. The birch trees are from Europe, the cottonwoods from southwest United States. The mountain meadows of California supplied the thick stands of rushes found along the river. The other curious reed at the water's edge, known as "horsetail," is an old-time resident of the United States. It dates back about 40 million years, according to the paleontologists. We also have native water primrose, which we inherited—it just crept out of the mud and joined us.

Disneyland's American wilderness is composed of Monterey pine, Carolina cherry, red cedar, elm, silver maple, cottonwood and birch.

The Moreton Bay fig in front of Aunt Jemima's Pancake House tipped the scales at 22 tons when it was moved into the Park. A native of Australia, it is a member of the ficus family, which includes rubber trees, figs, and the historical bo tree of India.





This arid rock canyon in Nature's Wonderland is as dry as it looks; California juniper, Joshua tree, piñon pine and red-flowering ocotillo are content with 110 degrees of heat and virtually no water.

The same flora, sprinkled here and there with wild flowers, persists as far as "Rainbow Arch," where we leave the green country for the parched land of the southwest desert. Authentic mesquite, cholla cactus, red flowering ocotillo and Joshua trees share the desert sunlight. Native junipers and piñon pines seek the shelter of the bluffs. In the springtime, poppies, desert primrose and sand-verbena add a splash of color, and in the summer palo verde trees display their delicate yellow blossom.

In all of Disneyland only in this desert setting can we offer an environment suited to native southern California plants. Anaheim's natural rainfall, though often unpredictable, generally averages about ten or twelve inches a year. For Frontierland's desert, this was almost too much water, and we were careful to select both soil and site providing maximum drainage as a compensating factor. (In all other areas, the normal precipitation was too little, and we installed a complex system of pipelines under Disneyland carrying water to augment the rather meager supply that falls from our skies.)

Adventureland

One of the favorite destinations of armchair travelers is the mysterious tropics—upper Amazon, Congo or the steamy jungles of Cambodia. Walt Disney has telescoped all these faraway places into a wondrous adventure aboard a river launch, and the whole area is called, appropriately, Adventureland.

The entrance to Adventureland from the Plaza is clearly indicated by tall bamboo and bright bougainvillea framing an arch of huge elephant tusks. Jacaranda and India rubber trees greet the visitor as he crosses the Adventureland bridge. So does another tree of great historical importance.

On the right just beyond the bridge, by the pink building, stands a young bo tree, the Buddhist "tree of knowledge." This ficus or "rubber tree" may be readily identified by the curious long tail which hangs from the heart-shaped leaf.

Legend has it that Buddha attained enlightenment while resting in the shade of the bo tree. Botanists recognized this association by naming the tree Ficus religiosa. All this took place in faraway India 2,500 years ago. Ultimately a huge temple replaced the original sacred tree. But the life of the tree was continued by means of a branch which was sent by King Asoka to the city of Anuradhapura in Ceylon in the third century B.C. The transplanted branch is said to have grown into the tree which stands today in the ruins of the old city. Worshippers of Buddha still journey to its shade and treasure its fallen leaves. The reverence which this tree has received through the centuries makes it the oldest tree in history of which there is a continuous record.

Making our way to the riverboat dock, we pass under the spreading limbs of another tree with a story, the history in this case being current rather than ancient. This is the South African coral tree (Erythrina caffra), which early in the year is resplendent with thousands of orange-red blossoms, and all summer long casts a welcome shade. The tree is a rapid grower. In ten years it has doubled in size, and is now too big to be moved by conventional methods.

This particular coral tree arrived at its present site Peter Pan fashion, by air. The magic wand was a 50-ton crane which reached over the stream to pluck the tree from the Tahitian Terrace and waft it to the boat dock. Washing the soil from the root system reduced the load to a mere twelve tons. Safely installed

The steamy jungle enveloping an ancient Cambodian shrine is recreated with the aid of Philodendron Evansii (left), spear lily, cup of gold, palms, bamboo and rubber trees.

in its new position, it faced another problem, however. The 55-foot spread of the branches created a wind load condition beyond the capacity of the newly transplanted root system.

Take a close look at the tree. Notice the auxiliary trunks which have sprouted, banyan fashion, from the underside of the main branches. These simulated stilt-roots are actually steel posts, and they have played a vital role in assisting our coral tree to weather the 60-mile-per-hour winds which occasionally occur in this locality.

Not far from the coral stands a huge old palm tree. Planted in 1896 by an early rancher, it was a stalwart and revered resident of his front lawn, admired by three generations of children and adults. One member of the family was married beneath it. When the owner of the land sold his acreage to Walt Disney in 1954, he requested that this venerable palm be preserved. Walt was more than happy to oblige, but since the tree stood in the middle of Section C of the projected parking lot, he ordered that it be carefully "balled," lifted tenderly from its old home and trundled, all 15 tons of it, to Adventureland. Today this stately 40-foot Canary Island date palm seems to be more comfortable than before, surrounded as it is by a variety of friendly tropical plants.

As you board the motor launch which will carry you through mysterious jungles, the boatman calls out his final warning of the precarious adventure ahead: "Wave goodbye to the dock, folks, you may never see it again!" So, bidding dry land farewell, you prepare yourself and camera for the boat ride that will introduce you to the amazing audio-animatronic animal actors and head-hunters of the wilderness, as well as to the plant wonders along the way.

The plants in our man-made jungle include hundreds of species. Many are actually indigenous to the locale they represent: kapok trees, jacarandas, palms and philodendrons from South America; rubber and orchid trees, ginger lilies and tiger-grass from India; giant bird of paradise and papyrus from Africa; an aralia tree that looks like a great stylized fern (with leaves eight feet long). Other plants include umbrella trees, elephant ears, lianas and bamboo in wide variety.

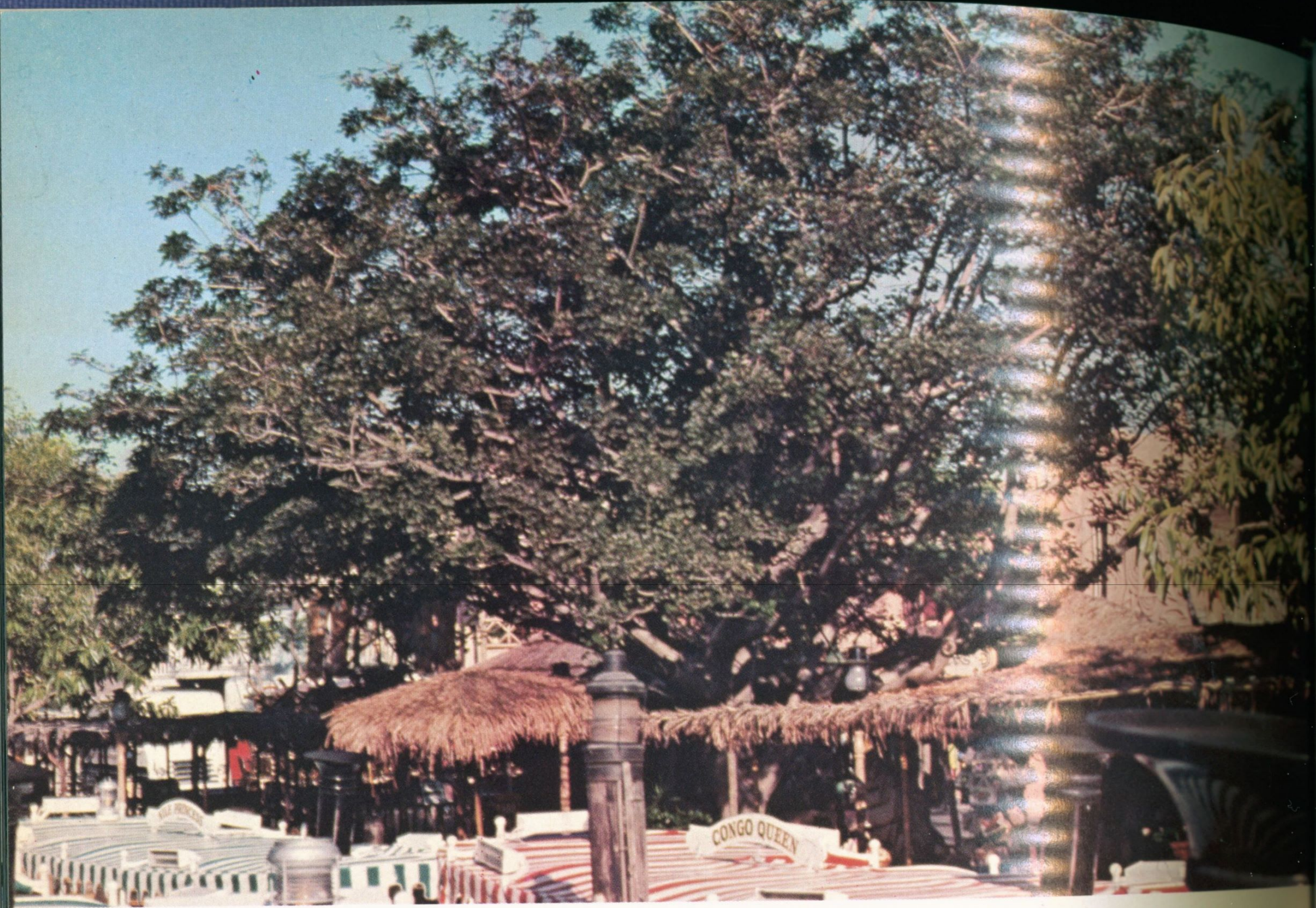
An honest-to-goodness jungle is often monotonous, dominated by only two or three species of plants. We have taken some liberties in order to add variety, color and interest to the Disneyland version. In our jungle you will see, in addition to the typical palms, bananas and philodendrons, giant honeysuckle, tree ferns and hibiscus. Blue passion flower, red trumpet vine and the wild purple bougainvillea compete for a place in the sun. Yellow cassias, red tecoma and white ginger crowd the water's edge.

In Adventureland, on the Jungle River Ride, a Congo landscape is achieved with a tangle of castor beans, lianas, cineraria trees, palm grass, queen palms and soaring bamboo.

In this lush tropical scene, Indian and African banana trees form a background for Tiger grass from the Malay peninsula.

In 1955, after the earthmoving equipment had departed from Adventureland, planting began in the sandy waste. As technicians were also at work dragging assorted mechanical crocodiles, rhinos and elephants in and out, the young plantings suffered. Some succumbed under the trampling, but most survived, luckily, growing large enough to fight back, until today our jungle is nearly as formidable as the real thing.

An African plume-palm arches far out over the water, marking the entrance to Nile country. Rubber trees, pampas grass, dombeya and aralia complete the jungle landscape.



A coral tree (Erythrina caffra) shades the boat landing. Despite its enormous size, this tree has been moved twice since its arrival at the Park. In the spring it glows with brilliant orange blossoms.

From the river dock, the launch first enters a rain forest where the sky is blotted out by tropical growth arching over the stream. In this dark tunnel, horticulture has reluctantly deferred to the prop department's artificial flowers. But once out in the sunlight again, real plants take over.

A by-product of the set dressing in the rain forest, incidentally, is one of the most unusual botanical surprises in Disneyland. A severed pepper tree trunk, intended only as a prop in the scene, defied the rules by taking root in the concrete river channel and growing up into a real tree. It seems content with the jungle, though its native home is in the high plateau country of Peru.

Another curiosity found along the Adventureland river is a plant known as "Bushman's poison." An extract from its small fruit is used by African pygmies to bring down elephants. Blowgun darts are dipped in this strong medicine, which acts like an anesthetic when mixed with elephant.

And while on the subject, just around the bend we come to the delightful Elephant Pool, where a lifelike troupe disports itself in

At a bend in the jungle river, elephant ear, ginger lily, tree fern and hibiscus are mirrored in quiet tropical waters.

This well-patronized water hole in dry African veldt country is landscaped with acacia, aloe and shrub aster. These sparse plantings are in marked contrast to the lush foliage material of the jungle.

the cool waters. Here you will catch a glimpse of the ombu tree similar to the one featured in the film, "In Search of the Castaways." Though our specimen is not as large as the one in the film, it is sturdy enough for the kingsize elephant who grasps the tree with his trunk and struggles to pull himself ashore.

When you come to the African veldt panorama, notice those flat-topped trees. They are acacias which have been pruned to simulate trees in the grasslands of the Transvaal. The giant aloes and euphorbia trees are authentic representatives of this same locale.

Papyrus, seen along the river banks—that reed with the fringe on top—contributes a true to life backdrop by the hippo pool. Papyrus is the source of ancient Egyptian writing paper; it is also the "bullrush" of the Bible which sheltered the infant Moses.

The oft mentioned "rubber trees," also on view in Adventureland, belong to the botanical genus ficus, or fig tree. In Disneyland we have at least 20 different varieties, and they play roles all the way from formal tub plant to jungle giant. One of these in our African scene produces edible figs in tight clusters along the hard wood of the branches. Back home in the Congo these figs are a favorite food of the chimpanzee.

Beyond Schweitzer Falls and the rapids of the Nile our launch approaches a shoreline guarded by two huge gorillas. A bamboo forest towering above these animated simians reaches 60 feet into the sky. Known locally as giant bamboo, the plant is botanically Sinocalamus Oldhami, native to southern China and India. It is quite at home in our California climate and, once established, will send up shoots like giant asparagus in the late summer. These become full-grown canes in a matter of only six or eight weeks. The smaller golden-green bamboo from Japan is much hardier to cold, tolerating near zero temperatures.

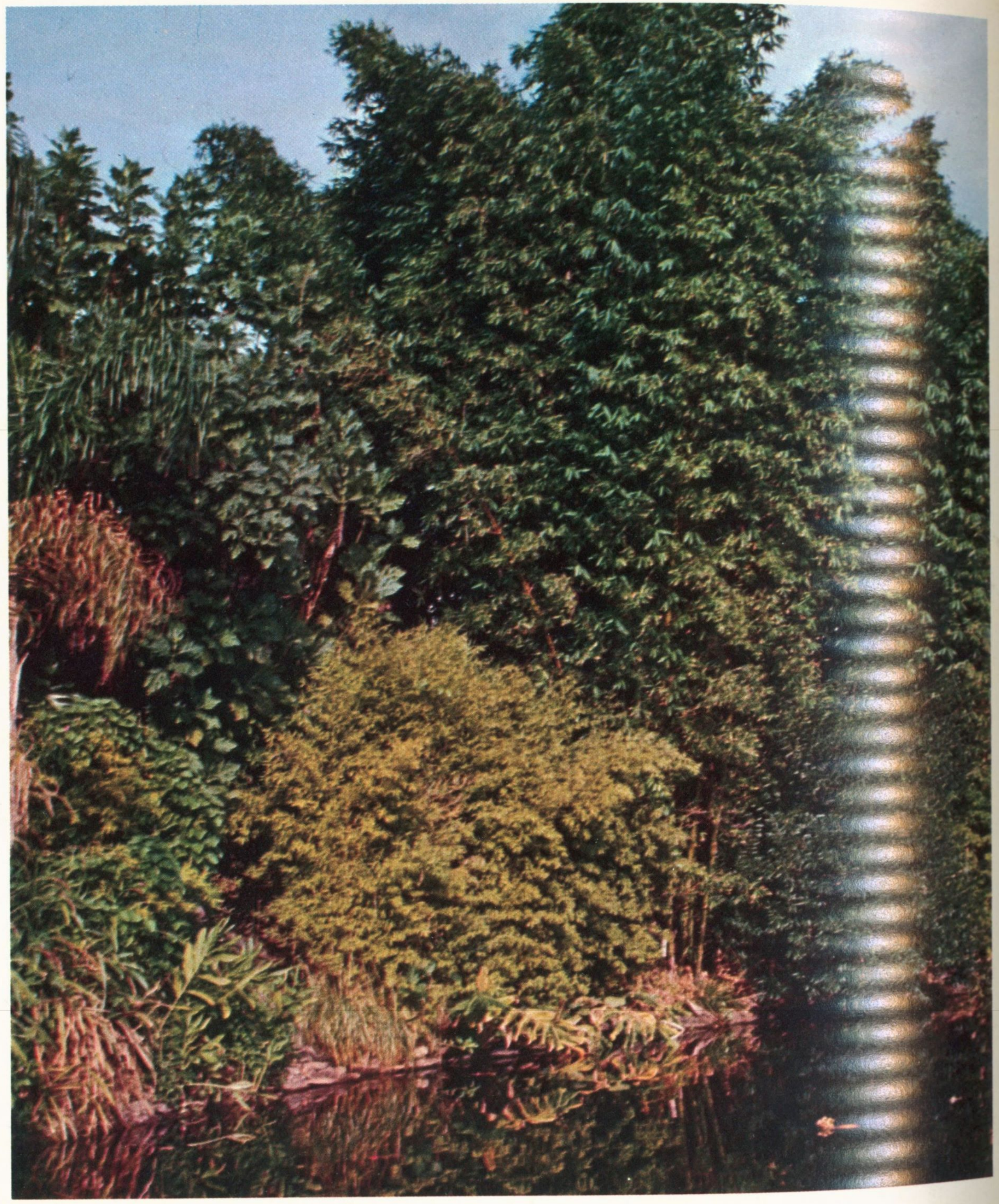
As our launch emerges from the jungle, returning us safely to civilization, notice on the left (on the island side) four curious multi-headed palm-like trees decorated with bright primitive masks. These "dragon trees," actually of the lily family and known as dracaena (meaning female dragon), come from the Canary Islands. There they develop enormous trunks and grow to heights of 60 or 70 feet. Very slow growers, they are among the world's oldest trees. According to dragon experts, the congealed juice of the plant resembles dragon blood, and was once highly prized for medicinal purposes.

On the right of the boat dock is the deli-

This Canary Island date palm formerly stood in what is now Section C of the Disneyland parking lot. Today it lifts its head high near the entrance to Adventureland.

A famed botanist once commented, "Not all elephant ears have an elephant between them". This elephant ear plant is cousin to the taro which produces an edible tuber, a staple food of many tropical countries.

Luxuriant growth crowding the water's edge includes giant bird of paradise, Kaffir plum and white-flowering yucca. To the left is papyrus, the bullrush of the Bible.



This impenetrable wall of foliage is composed of giant bamboo from India, Japanese golden bamboo (foreground), a senecio tree (with scalloped leaves) from Mexico, palms and ginger.

cate baby orchid plant (Epidendrum O'Brienii) called Sangre de Cristo (Blood of Christ). Every day of the year it displays clusters of cinnabar red flowers with a yellow crucifix in the center. This hardy, everblooming orchid, also available in many other colors, is one of Adventureland's little treasures.

Outside the jungle proper, on the outskirts of Adventureland, we have installed a variety of tropical plants with strong foliage patterns around the base of the Swiss Family Robinson Tree House. They are Philodendron Selloum and Evansii, Monstera deliciosa, elephant ear and tree fern. Here also you will see the pygmy date palm, a most attractive palm native to the Nam Ou River valley in Laos. This Phoenix Roebelenii, a popular conservatory favorite in Europe at the turn of the century, is still widely grown and distributed as a small indoor pot plant. But it also has many uses as an out-

The Swiss Family Robinson Tree, christened Disneyodendron semperflorens grandis by the landscape department, has concrete roots, manzanita branches and plastic leaves. This man-made tree is a triumph of Walt Disney's "imagineering"!

door subject in mild climates. This is a date palm in miniature, as it might appear viewed through the wrong end of a telescope—the same trunk and graceful leaves, even the same dates as big brother, but reduced to Lilliputian scale.

Another oddity on display here is the "centipede plant" from the Solomon Islands. What appear to be leaves are actually flattened stems meandering around in multiple branching form. Only upon close examination, true leaves the size of shoe-lace tips can be discovered intermingled with tiny "hot pink" flowers. Though of equatorial origin, this plant flourishes in our climate.

In our tropical setting beneath the Tree House a New Zealand tree fern has found a happy home in company with araliads from Mexico, bamboo from China, and Brazilian rhubarb with leaves that sometimes reach six feet across.

The Swiss Family Tree House perches high in the branches of what may well be the largest artificial tree in the world. Since it was impossible to move to Disneyland a living specimen of sufficient size and strength to support the Tree House, our engineers undertook to build a convincing counterpart of the huge tropical tree in far-off Tobago, where "Swiss Family Robinson" was filmed.

This engineering wonder has immense cement roots that plunge 42 feet into the ground, and giant steel limbs spreading 80 feet wide, supported by simulated stilt-roots. Its upper branches, formed of manzanita, display 360,000 colorful plastic leaves and flowers, each one attached by hand.

For purposes of botanical identification, this "rare" specimen tree has been unofficially christened: Disneyodendron semperflorens grandis, which means "LARGE EVER-BLOOMING DISNEY TREE"!

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**CORRECTIONS:

Elm mentioned on page 11 is a Chinese elm, not a Siberian elm.
Cabbage tree (page 19) is from New Zealand, not Australia.
Feather palm mentioned on page 37 is from Argentina.

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